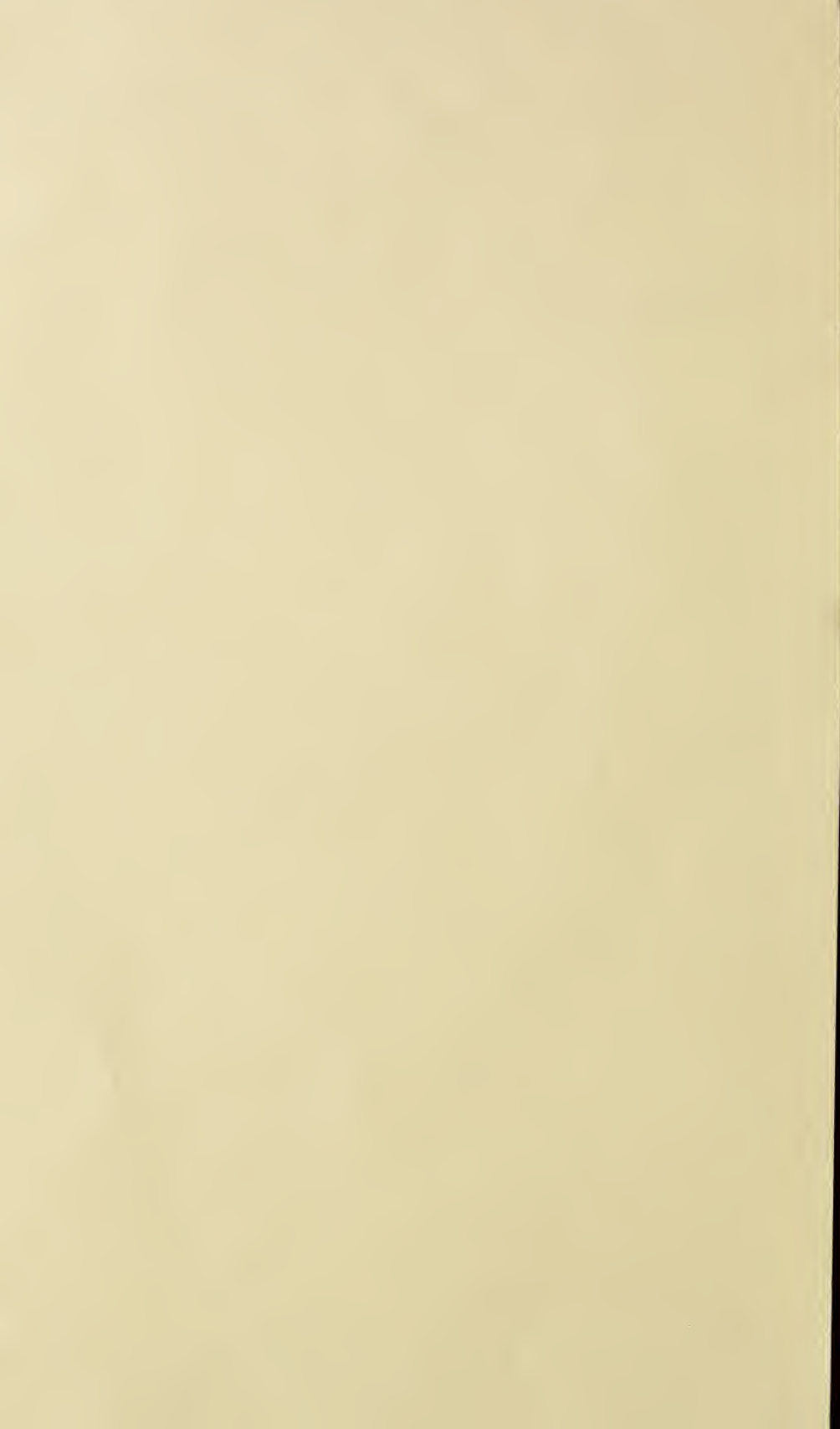


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Gardens for Farmers,

BY PETER HENDERSON.

Next to the gardener proper, no class of men can more easily supply themselves with fruits and vegetables than the farmer; he has the land, horses, and usually all the implements needed in the cultivation of the soil, and his knowledge of farm crops makes it easy to acquire the different details needed for the culture of the garden.

This fact is broadly apparent when we know that a majority of the market gardeners of New Jersey and Long Island were originally farmers, and that comparatively few of them were regularly trained to the business of gardening in their youth. Yet in view of all this we find that very few farmers living away from our large cities cultivate either fruits or vegetables, and their tables are far less bountifully supplied with these than the day laborer of the city, who supplies himself from the abundance of our markets, even with such luxuries from his dollar a day.

There is yet somewhat of an idea prevalent even among farmers that the products of the garden require a soil different from that of the farm; this is a delusion—any soil that will grow good crops of corn, hay, wheat and potatoes, will grow good crops of almost any variety of fruits or vegetables, only, of course, the higher the cultivation will be in either case the more satisfactory will be the crop.

What the extent of a farmers's garden should be must be decided by his wants or means of culture, though it may be laid down as a general rule that one-fourth of an acre or a space of 100 feet by 100, would be ample for the requirements of any ordinary sized family.

For convenience the kitchen garden should be near the dwelling, and if appearances enter anything into consideration, it would be better placed at the rear than the front of the house.

When there is room to use the plough and harrow in preparing the ground for the garden crop, these will always do the work more thoroughly

than the spade; even in preparing the ground for our most delicate flowering plants we always use the plough in preference to the spade when it is practicable to do so. What, kinds of vegetables and fruits to plant and the space to be allowed to each will come next in order. In vegetables, Asparagus is a very important crop and when once properly planted will take care of itself, if the weeds are kept off, for 20 years. This proper planting consists first in having the soil deeply ploughed and subsoiled to a depth of at least 18 inches and thoroughly enriched with manure and in having good healthy plants set out at about 12 inches each way—a space of 6 feet by 30 requiring 300 plants. It takes two years usually from time of planting for asparagus to yield a full crop, but when once in full bearing a bed of the size named will give an unfailing supply.

Rhubarb, like asparagus, gives a crop many years without renewal: a dozen plants set 2 feet apart will suffice. The general crop of vegetables are mostly grown from seeds, the detail of the quantities of these are so much a matter of taste, that it need not be entered into, I will briefly say that an assortment embracing peas, beans, beets, onions, radishes &c., will, costing from \$3 to \$4 duly apportioned, be sufficient.

Such vegetables as cauliflower, cabbage, lettuce, tomato or egg plants, had better be set out in plants, and if they can be purchased in the vicinity where wanted all the better, as they are too tender to transport far—100 each of cauliflower, cabbage and lettuce would be enough, while two dozen tomato plants and a dozen of egg plants would produce all that is likely to be needed. Any special details for culture would be unnecessary when the books on the subject are now so easily procurable.

In small fruits, perhaps, generally appreciated are grapes. If the ground allotted to the garden is fenced, (which it should be) the fences can be used to great advantage in training the grape vines. Wire or wooden slats should be placed 6 or 8 inches

from the fence so as to admit air. Grape vines so trained having a South or South-east aspect will mature crops earlier and will generally be more certain to bear than if not so sheltered; besides when trained against the fences but little ground space is taken up. 12 or 15 grape vines, comprising, say 6 or 8 sorts, when in full bearing, will give a large supply. The varieties are now so numerous and are yet yearly improving that it is hazardous to recommend what are the best, besides it is so much a matter of individual opinion, that it is rare that any two cultivators agree on what could be recommended as the best half-dozen sorts. I fruit some 20 sorts, and from these would name as the best for general cultivation, Concord, Delaware, Iona, and the Rogers hybrids, Nos. 15, 22, 41, and 44, these comprise nearly all shades of color; extending in their period of ripening in the latitude of New York from the first of September, through October.

Strawberries come next in importance among the small fruits. A bed of the size recommended for asparagus, and requiring nearly the same number of plants, would be ample for all the requirements of an ordinary family. The product from such a bed, under fair cultivation would be at a low estimate 100 quarts, which would be from 4 to 6 quarts a day during the season. Though strawberries will bear fair crops for two or three years if properly trimmed and top dressed with manure, I am one of those who believe that the finest fruit, if not the heaviest crops can be best got by planting each year. By what is termed the layering method a full crop can be obtained in nearly 10 months—that is plants set in August, if properly handled give a full crop in June. As this method has recently been extensively published in the leading agricultural journals, and also in books specially devoted to gardening, there is no need to detail the plan here.

The varieties of strawberries like grapes are now very numerous but for general cultivation no one would go far astray in planting either "Monarch of the West," "Charles Downing," "Seth Boyden," "Beauty," "Triumph de Gand," or "Great American," or the whole of them. Raspberries and blackberries follow strawberries, about the same area, 50 feet by 6, may be allotted to each; though the distance apart, at which they should be planted is wider, of course, namely 2 feet by 3. The new raspberry "Pride of the Hudson" (red); "Caroline," (yellow); and "New Rochelle," (purple) bid fair to supersede the older varieties of the same color. In blackberries, Wilson's "Kittattinny" and "cut leaved," ought all to be grown if the full season of fruiting is desired, as they comprise

the earliest and latest sorts, in the order named.

In currants 25 red, 12 white and 12 black would be about the proper number—planted 2 feet by 3. In gooseberries the only kinds that do well here are our American varieties, known as "Downings," a greenish white, and "Houghton's Seedlings," (red) they are of medium size and fair flavor, a few of these may be grown but they are not generally very satisfactory.

Americans visiting Europe are astonished when they see the great variety and immense size of the gooseberries grown there, for in England it is one of the finest of small fruits, and our travellers buy thousands of the bushes from the English nurserymen and send them here every season, which rarely fails to result in disappointment, for these English varieties are all but worthless when grown in our hot and arid summers.

No more profitable study can be engaged in by agriculturists than that of the influence of climate on vegetation, a more thorough knowledge of which would prevent many such blunders. I once heard of an Englishman who, on returning from a summer trip to the United States, and who had been delighted with what he had seen of the products of our tropical summer, and concluded he would astonish his neighbors by the crops of maize, melons, &c., that he would produce on his Yorkshire farms, but he was doomed to disappointment. His melon seeds rotted in the ground, and there was not sufficient warmth in his Yorkshire climate to grow his corn crop a foot high. On the other hand, we have Scotch and English farmers coming here every year by the score who are forced to learn that oat or turnip crop will not respond as they did in the lower temperature and moister atmosphere of their native country. But this is a digression.

Many farmers have their apple orchards; but pears, cherries, peaches and plums are not so common, all these are now so easily procurable and cheap, that though they may not always do well, a dozen or so of each class would be well worth planting. In nearly all cases where fruit trees are to be purchased the farmer should buy from the nurseryman nearest to him in preference to buying from agents, and if he is such on whom he can rely it is much better to allow him to make the selection of kinds than to make it himself; most nurserymen grow the greater part of their stock of the leading kind, and their selection is almost certain to be better than that of the buyer, which in most cases is made only from descriptions given in catalogues. As it takes years before most fruit trees come into bearing, it is all important that the best kinds only are planted, and the greatest cau-

tion should be exercised in making such purchases. Most of those interested in grapes will remember that when the Delaware was introduced, that plants no larger than knitting needles were sold at \$5 a piece by Dr. Grant of Iona and others. About that time a tree agent came along one day and sold one of my neighbors five vines, each twenty times the size of Dr. Grant's, for \$3 a piece—wanted Delaware. These vines have borne fruit now for dozen years, but so far not a bunch of Delaware—they were all Concords. My neighbor is rather an irascible gentleman, and ever since it has been most unfortunate for any tree-peddler who stumbles into his domain.

Does the farmer's garden need flowers? I know that his wife or daughters will say so. What they should be I will not venture to name, for the variety now is legion, and as descriptive and illustrated catalogues both of seeds and plants are now sent everywhere, selections can be made to suit the circumstances or taste of all. In the matter of seeds and plants the mail affords great facilities, so that the residents of our western frontier a thousand miles away, can get his supply of seeds and plants just as cheaply and as safely as if there was a green house or a seed store next door.

Independent of the pleasure that the farmer may derive from his garden of fruits, vegetables or flowers, there is no doubt that in many cases it leads to a business far more profitable than his crops of the farm. In our growing country towns and villages spring into existence where a decade before was only an unpeopled waste, and the shop-keeper, mechanic or artisan is glad to buy the surplus the farmer may have from his overflowing garden.

This I know to be the fact in scores of instances, where the business of Nurseryman, Market Gardener or Florist was, as it were, just forced upon the farmer by his village neighbors desiring to buy the products of his garden.

The original proprietor of one of the largest seed houses in the city of New York emigrated from Scotland sometime about the beginning of the present century; he was a nailer by trade, and was entirely ignorant of anything pertaining to seeds or gardening. But one day, coming through the Bowery, then half farm, half city, he saw a rose bush in a cottage window. It was a rose in the wilderness, for probably there were not a score more in the then city of New York. He went in and bought it for 50 cents, took it home, painted the pot green, and placing it in the window of his nailshop, quickly sold it for a dollar. This was easier work and better pay than nail-making. He

started out daily buying plants of all kinds, always painting the pots green (a practice that modern science would frown at), and doubling his money rapidly. From plants the transition to dealing in seeds was natural and easy, so that in less than 20 years from the time this humble Scotch nail-maker had purchased his first rose bush in the Bowery, his seed house had become the largest on this continent.

Similar experiences have no doubt occurred in many other cases. We, here in this city, where our markets are always overflowing with fruits, flowers and vegetables, can hardly understand the value that is set upon them when first introduced sparingly into our far western towns. An enterprising gentleman had got up what is called a club order for plants, and sent it to me some weeks ago. He wrote after the receipt of the goods, that Beecher had once lectured in that town, Barnum's Circus had been there, and that a fashionable Chicago milliner had once pitched her tent in the main street, but all these events were mere bagatelle to the advent of the opening of that mammoth box of plants, that luckily had arrived in grand order, and had set half the women of the town wild with excitement.

I have before said that many of our Long Island and Jersey market gardeners were originally farmers, and not a few of them have ever advanced farther in what may be termed the social scale of gardening, and now combine floriculture also. If any suggestions I have just made will help to that end others, I will be gratified.

[It gives us pleasure to furnish our readers with the fore-going in Raman interesting Essay, read before the American Institute Farmer's Club, New York on April 23d, 1878. Its perusal will well repay any one who has a small or large garden, or who desires to have a good one. Mr. Henderson is an experienced, practical gardener and florist, and well informed. Thousands of his instructive works, like *Gardening for Profit*, and *Gardening for Pleasure*, having been doing good service for years past, in the hands of persons who otherwise would have remained ignorant of the best culture for fruits, flowers and vegetables. After reflective reading this Essay, who will be without a garden, when so little labor on so small a space can be made to yield such quantities of delicious vegetables for the table the year around. We have often urged our friends to pay more attention to the vegetable garden, as a source of comfort in living, health for the inmates of the house-hold, and both pleasant and profitable to the one who takes charge of it.—*Eds. Md. Far.*]

Farm Work for June.

As the season is acknowledged everywhere to be three or four weeks in advance of most years, the Harvest will be very early this year and we should make immediate preparation for it. The earlier the season the more active the industry must be. The crops must be worked and will not wait, without ruinous consequences and all the different crops require attention at the same time, hence there has not been in our recollection a year when the farmer has been so heavily taxed with a pressure of work as he has to encounter this June—Thanks to a kind Providence, the prospects for very large crops of every sort are so flattering as to stimulate the farmer to exert his utmost energies in the almost certainty of reaping a rich reward for his labor.

HARVESTING.

Nothing better evinces the judgment of the farmer at the season of harvest than the provision of an adequate force of hands to push matters through as early as possible. He thus avoids the contingencies of rain, of shattering from over-ripeness and the labor of undoing wet sheaves and exposing them to the air to dry, thus causing not only a loss of grain, but also an injury to its quality.

When the want of field hands is badly felt, machinery should be brought into play, and in such neighborhoods where the farms are small and the farmers in moderate circumstances, it would be well if the necessary machines were bought and held in common, and a system of co-operation introduced, under such rules as might be found most advantageous to the attainment of the ends in view.

From some cause, we cannot tell, the grain-cradles of Grant and others are in greater demand than we have ever known them, even before Reapers were in general use—What is the reason? Is it owing to high price of reapers, or that farmers prefer the Cradle to the Reapers? Or that farmers have learned that it is economy to get the grain cut down and secured in a single day if possible, therefore not only start a Reaper in one part of the field, but Cradles in another part or separate field, any six of whom if they are experts and try themselves, are equal to the best Reaper ever made; and will save the grain better. This we know sounds "old-timy," and by many will be called *heterodoxy*. In any event, let the Harvest Implements of whatever kind, be of the best character. A bad tool makes bad work; it makes slow work; increases labor, and retards the progress of the farm work.

Time for Cutting Grain.—The best period for cutting wheat is when the grain has passed from its milky state, and takes under the pressure of the thumb and finger the consistence of tough dough. Cut at this time the grain will be plumper and heavier, the flour whiter, and the tendency to shatter, which is so common to over-ripe wheat, as well as the liability of the heads to break off, will be obviated.

An experiment was carefully made ten years ago by a thoroughly careful English farmer, to test this question fairly. He divided a piece of grain into five parts and cut it at the following intervals with the following results.

No. 1, cut a month before fully ripe.

- | | | | | |
|----|----------|------------------|---|---|
| 2, | 3 weeks | " | " | " |
| 3, | 2 " | " | " | " |
| 4, | " 2 days | " | " | " |
| 5, | " | when quite ripe. | | |

The yield of flour from 100 lbs. of grain so cut was as follows;

	Flour.	Middlings.	Bran.
	Lbs.	Lbs.	Lbs.
1	75	7	17
2	76	7	16
3	80	5	13
4	79	7	14
5	72	11	15

Here we see that grain cut two weeks before it was ripe gave an increase of $6\frac{1}{2}$ pounds of flour over ripe wheat (No. 5) and a gain of 15 per cent, on the flour of equal measure of grain.

CORN.

Keep the shovel plows and cultivators running constantly through the corn rows until the crop is sufficiently advanced to lay by—The great secret of growing large yields of corn on good soils in good condition is to keep the soil mellow and deeply stirred to admit moisture and air to the roots and the exclusion of weeds.

BEEFS, MANGELS AND CARROTS.

It is late to sow these, but in rich, well prepared ground, a fair crop may be expected, if sown at once and well taken care of afterwards.

POTATOES.

If not already planted, plant as soon as you can and provide at once yourself with Paris Green and some one of the many implements lately invented for sprinkling the bug-poison over the vines—We know that they have already come in myriads in some parts of Maryland and commenced their ravages on the early potatoes as soon as they appeared above ground. In one instance within our own experience 1 quart of bugs were gathered in three days picking, the first week in May, from two

rows of potatoes 100 feet each long, in a small garden, when the vines were just above ground. They last year eat up our Egg plants and many tomato plants, as, of course, we could not use on them Paris Green, which must not be applied to any vegetable that bears fruit above ground, it being a deadly poison.

BROAD-CAST CORN AND MILLET.

Sow corn broad cast or in drills 2 feet apart cover it two or three inches deep with plow or drill. It requires from 2 to 4 bushels of seed corn to the acre. Millet, Golden Millet or Hungarian Grass should now be sown on well prepared, rich land, harrowed in and that intended for hay, cut before the seeds ripen at all—There is a decided difference in these grasses, but we do not consider the difference at all material—our preference however would be for the Hungarian—It is too valuable a crop to be ignored by any land owner who keeps stock or poultry.

That observant old journalist of the famed *German town Telegraph*, says every man who likes a little quiet sport and delicious morceaus at small trouble, should sow half acre of millet near one or two small trees for the birds to light on, within the right distance from a blind or thick grove, so that when the millet ripens, he can shoot as many reed-birds as he may want; for at that season of the year they will appear and find out every millet patch within mile of their haunts. Those who live in lower Maryland so famous for its ortolan and reed-bird localities, should take note of this, and thus provide sport at their own doors. Like the cedar-birds in cherry time—as soon as a flock may be fired into, they will circle around and light again in the same tree, before the gunner can reload and pick up the dead game.

CLOVER FOR HAY

In harvesting clover for hay, cut when about half the blossoms are turning brown or a little before. Try and select a dry spell, what is cut in the morning, rake and put in 100 or 150 lbs. cocks in the evening; next day or two, open them and when dried put it in the barn or rick, if the latter cover well the top with straw—Tramp the rick well while it progresses keep the sides closely raked down and straight as the side of a house—Sprinkle salt, lightly over each layer of hay as the rick or stack progresses—a half bushel to a ton is enough. Every man who has ten acres of clover or other grass to cut for hay should own or hire a mower, and every farmer should own a Hay-Rake—it saves its cost each season by the celerity and efficiency it does its work, over hand-raking in raking grass, weeds, or gleaning the wheat fields—

There are many aspirants to public favor among Hay-Rakers, but we individually prefer the Archer which can be made a self-discharger, or remain to be worked by hand as the driver may wish—A boy or girl can easily work it, if they can drive.

BUCKWHEAT.

Prepare the ground for Buckwheat ready to be sown next month—A sandy loam is best for this crop.

RUTA BAGA.

Sow for a large crop of this very valuable root for stock. Make the land rich, deeply plowed, well pulverized and sow in drills 18 or 20 inches apart between the 15th of June and 1st of July—Select a rich, light loam for this crop, and use about 400 lbs. of some fertilizer rich in pot-ash lime, ammonia, phosphoric and sulphuric acids.

SHEEP SHEARING.

If not already done, let this work engage your immediate attention. Unless you have a skillful and reliable man to do the work, be sure and personally supervise the shearers or your poor sheep will be cruelly treated and wounded—After shearing dip them in a steep made of tobacco boiled, reduce with water so as to be a weak lye or decoction of tobacco—Don't let it get in the nose, eyes or ears of the sheep. A few days after shearing dip the lambs in like manner and the flock will be free from ticks and other vermin. Keep the sheep sheltered during storms or cold rains, for a month after they have had their coats taken off.

Garden Work for June.

During this month there must be constant and thorough cultivation of the growing plants. Nothing suffers more from neglect than a garden: and there is no spot on the farm that repays better for liberal manuring, incessant attention and thoughtful care. We make a few suggestions,

Planting Cabbages.—Set out in moist weather—No crop delights more in rich soil than cabbage—The same ground should never be planted in cabbage oftener than every third year—It will not do to follow cabbage year after year on same ground. Lift the plants carefully. Have ready any rude vessel, and in it a mixture of soot, fine earth and cow manure, reduced by water to the consistence of cream. Put the roots of the plants in the mixture, deep enough to cover them, and keep them there until they are taken out to go in the hill, for even a day or more, if they cannot be planted sooner—Plants should be large, with thick stalk and bunchy roots.

Brocoli and Cauliflower.—Follow the same directions in planting these splendid sorts of the brassica tribe, as given for cabbage—Sow seeds of these sorts and also Drumhead Savoy and Flat Dutch for a full supply of late autumn and winter crops,

Sow Bunch Beans and Peas for a succession of crops,

Lettuce and Endive.—Set out a few plants for heading, and sow more seed.

Small Salading.—In short intervals sow a small bed, to keep up the supply.

Radishes.—Thin radishes to three inches apart and sow fresh seed of summer sorts every ten days.

Beets, Parsnips, Carrots, and Salsify.—All these roots require attention. Keep them free from weeds and the soil stirred often by hoe and rake—This implement is not used often enough. If used frequently, it is as effective as a hoe and twice as expeditious, and leaves the ground in neater appearance.

Onions.—Work these occasionally, keeping the soil loose about the bulbs but not covering them.

Okra.—Thin the plants to 8 or 10 inches apart and give a slight hilling.

Tomato and Egg Plants.—If not done before, transplant early in the month—The Egg Plant requires a rich soil.

Late Roasting Ears.—Plant a few rows for a succession of this popular vegetable.

Winter Squash.—Plant these 10 feet apart in hills made very rich. Hubbard squash is best, next best, Turk's Cap, which will run on fences, or trees and therefore take up but little room.

Peach Trees.—Examine the roots of Peach, Plum and Quince trees a few inches below the surface of the ground. If gum exudes, the grub is certainly at work under the bark. Take a pen-knife or sharp stick and cut it out by following its course, or follow it up with a piece of wire or course knitting needle and do not stop until it is found and destroyed—Strew wood ashes or slack-lime over the roots and cover all up again—Wash the bodies with soft soap, ashes and water mixed to the consistency of thick cream. Apply with a white-wash brush.

Interesting Facts.

The number of seed of wheat in one pound is 10,000.

The number of seed in one pound of barley is 15,400.

The number of seed in one pound of oats is 30,000.

The number of seed in one pound of buckwheat is 25,000.

Dignity and Importance of Labor—Concert and Harmony of Action—With Steady Determination to Look to the Farmers' Interests Above all Other Considerations.

[This view of the agricultural profession is well taken and handled by the accomplished lecturer—Jas. Cheston, Jr., Esq.,—in the following Essay, read before West River Grange, No. 15, A. A. Co., Md., on the 21st March, 1878]

A wise Providence has so arranged that the different occupations of man, center, and affect the interest of one another. But particularly may it be said of Agriculture, that it affects the interest of all classes. The king and the peasant, the learned and the unlearned, establishing and directing the commence of the world, prescribing the limits, and fixing the channels of trade, giving tone and effect to diplomacy, and all potent in the councils of war. It has ever been the subject for the careful consideration of the most distinguished political economists of all ages.

I am not here to-day (I frankly admit I am unable) to touch the scientific side of the question, not that I desire to throw any disrespect upon agricultural science—indeed, it is much to be regretted—that, this science should be so little understood, or appreciated by our profession. I have no sympathy with that wide spread prejudice against what is termed "book farming;" it is urged that these scientists make sad failures in practical farming; admit it: and what does it prove? it proves, but that these men fail to add to their knowledge that attention to detail which is necessary to success in our calling. This is not only the case in our profession; but it applies equally, to the profession of medicine; for it is a notorious fact, that some of the most scientific men and best writers in the profession, have been most unsuccessful practitioners; and, yet, what medical man of sound judgment, will discard the writings of these men? Does he not rather endeavor to appropriate their knowledge, and make a practical application of the same, according to his own judgment; and we agriculturists would do well to adopt the same plan? But it is not with the science of agriculture I have now to deal, nor do I intend to speak of the practical working of agriculture. There are men upon this floor far better able to handle this question than I am: that they have failed in the past to give us the benefit of their knowledge is more to their shame. My task, this evening, is, to say some few words, to the farmer himself, no matter how weak the instrument that ventures to speak, if I can set the farmer to thinking, my great object is gained; if I can but convince him that he belongs to a noble profession whose dignity and honor, it should be alike his duty and pleasure to uphold, I shall be more than compensated for my pains.

I am led to speak upon this subject from the conviction we farmers have, and are making a fatal mistake by our mode of thought and line of action. An old writer on agriculture, nearly a hundred years ago, says, "Fashion, when it is content, to regulate the exterior and frivolous, is a

matter of great indifference, with respect to morality; but it now no longer confines itself within that sphere; it extends its empire over the arts and sciences. If a few geniuses chance to acquire reputation and honor by any particular branch of knowledge, people in general, immediately apply themselves to it, without considering whether it deserves the pains they bestow upon it." We have seen the reigns of Erudition, Wit and Geometry pass away. That of Philosophy, and particularly Natural Philosophy, rules the present age. When those transient reigns are over, one is often surprised at the high value set upon certain parts of knowledge, which, in fact, deserve but a moderate esteem. The same writer goes on to say, "There cannot be a stronger proof of the unreasonableness of these vicissitudes than what has happened to the most necessary and useful of arts—agriculture." Now, if agriculture was turned by the revolving wheel of fashion in the age of the above writer, so does it meet with the same fate in our own time; and that such is the case, is chargeable largely to ourselves. We complain of the want of legislative aid; we complain that our interests are neglected, and that we are made to take a secondary position in the social scale. Now, I for one, want to know the cause of this; I want to get at the root of the matter, no matter how painful the probing may be; and I strongly suspect, that if the probe is honestly applied, it will discover the fact, that we are not equal in business intelligence to the men in other professions. This is not a very pleasant way to put it; but, let us have the truth. Now comes the question. Why are we lacking in this business intelligence? because as a class, we have no zeal and love for our profession; we are wanting in a proper appreciation of the honor and dignity of our calling; our interest is isolated, so extremely isolated are we in character, that our own immediate and selfish interests suffer from this suicidal love of isolation. "No man liveth to himself," is a material as well as spiritual truth, and cannot be violated, without affecting the material, moral, and intellectual condition of man; hence we are styled men of narrow views, and running over with blind prejudices. Is it denied that this is the world's estimation of us? Then, look at the literature of the day, and what is this literature, but a picture of society as it exists? Do farmers figure upon the pages of this literature as representative men? No. We have them portrayed in turn—the clergy, the law, the medical men, the soldier, scientist and merchant; but the farmer is unseen as a central figure, in life's drama. True, society takes a selfish interest in the result of the farmer's labors; but in the farmer himself, the world has very little interest; like a corn cob, he will serve to stop a bung hole. Are we willing to be mere corn cobs in the world's estimation? If not, we must begin to look at our calling in a new light; we must look at it as a profession, needing as much intelligence, as much careful study, and patient drill as other callings; we must realize the fact, that a first-class farmer, embraces more than merely working and raising crops; he must have the knowledge of protecting his capital, at home and abroad; at home, by a judicious management of his soil; *abroad*, by giving aid, and suggesting lines of legislation tending to the welfare of agriculture.

If you go into the mercantile world, you will find one man pursuing a certain business, never allowing his mind to wander from the direct issues of that business. You will find a man classed as a shop-keeper, but not recognized as a merchant. You will find a man, perhaps, recognized as an honest and well meaning man, but one without influence or position in the world; this is your man of isolation.

A first-class merchant is one who sees that his business requires his attention, not only in those influences which bear upon his affairs, but also in those influences which are more remotely removed, but not less certain in their ultimate effect. Did these first-class merchants take the narrow, and contracted view that we farmers do, cities would be unbuilt, and trade cramped and strangled within a narrow channel.

Fellow patrons! let us come up fairly and squarely to this question. There never was a time, in our history, when agricultural interest called so largely for brains, as the present. Muscle without brains, can accomplish but little. We live in an age of sharp competition, and the busy brain is called upon, to direct at every turn of the wheel.

I ask the Grange to bear with me, while I draw up my indictment against the men of our calling. If it be false, let some brother rise and show it to be so. First, I charge that our farmers are wanting in interest in their profession. Secondly, I charge that when partial interest does exist, it is cramped and confined within the narrow limits of a man's own boundary fence. Again, I charge, that there exists no co-operation, or unity of action amongst us. And lastly, I charge, that our farming interest is subordinated, and made to pander, to the wishes of the profession of politics, to the great detriment of the agricultural interest. First, I put it to this Grange, whether there is not a growing apathy on the part of many of our farmers, (particularly among the young,) towards their profession. Have they not yielded up their farms into the hands of ignorant men, while they themselves find food for thought, in matters entirely foreign to their occupation? I know the answer comes, that want of means leads to this ruinous practice; I admit, in some few cases, this may be true; but in the great majority, it is but a poor excuse. The true cause lies, in a distaste to the profession itself, a reluctance to give the farm that careful thought, and watchful attention, which it requires; and so the farm suffers, the community suffers, and the profession gains no honor from those, who by education and natural gifts, are peculiarly fitted to do it credit. We have another class of farmers, interested indeed, in the result of a crop, interested in what is immediate and direct; but utterly oblivious to all side issues and influences. They cannot see that they have duties beyond their own inclosures; duties, which if neglected, must tell against their individual influences. These men may be good managers of land, but they cannot be called, in the highest sense, farmers. Again, we fail to co-operate, hence the want of unity of action.

We are seized, at times, with spasmodic attacks of public spirit, but cannot hold together long enough—to mature and put in force our deliberations,—while one man is urged up to the point of interest, another falls back, and so we are coming

and going, but never move in force together. The want of interest and apathy on the part of some, the narrow, cramped, and partial interest on the part of others, and the want of co-operation and unity of action are all—most unhealthy signs, and enough in themselves, to mar our profession. But all these combined, are as nothing, in comparison with that blind, infatuated, and suicidal allegiance, that most unaccountable following the dictation of professional politics. Every man has the right to hold to his political creed—it is manly to do so; but when political professionalists use political creeds and hackneyed expressions of devotion to party as a cloak to cover the true inwardness of their profession, it is high time for the farmer to ask himself, whether or not the profession of politics is not antagonistic to the profession of agriculture; so bold has this profession become, that it demands that the plainest and simplest interest of the farmer must be submitted to the crucible of the politician, before it can be even submitted to the consideration of our legislature. It matters not, if in that crucible it undergoes a change, and ceases to be the drug required by the farmer.

The great question is not the life of the farmer, but the prosperity of the politician. How long will our calling be deceived by a name, cajoled, frightened, or forced into submission to the strong power? Not a measure of importance, large or small, to the agricultural community, no matter how free from conflict with other great and legitimate interests of the state, can find its way into the statute books, if in the measure there be the faintest taint of opposition to the profession of politics. It would be amusing, if not such a grave subject, to hear farmers rail against an interest that they suppose antagonistic to agriculture, when at the same moment they are feeding and helping into power the very men who suck the life-blood from us. That there is such a thing as the profession of politics, there is no doubt—a profession supplied with able men, full of cunning deceit. It is no less certain, they must be checked, or our interest will go on to suffer morally, intellectually, and materially.

Fellow Patrons! there is much in the times to make us pause, and consider; let us not turn a deaf ear to the sounds of warning that come upon every side. Our calling is in danger; our characters are at stake to uphold the dignity and interest. It is our privilege and duty to see that her interests are advanced and sustained. If we refuse to accept this duty, and allow an enemy to sow tares amongst the wheat, we have no right to expect pecuniary reward, or professional respect from the rest of the world.

WHAT MAKES A CAR LOAD.—Nominally an American railroad car is 20,000 pounds. It is also seventy barrels of salt, seventy of lime, ninety of flour, sixty of whiskey, 200 sacks of flour, six cords of soft wood, eighteen or twenty head of cattle, fifty or sixty hogs, eighty to ninety head of sheep, 6,000 feet of boards, 840 bushels of wheat, 400 of corn, 680 of oats, 400 of barley, 860 of flax seed, 360 of apples, 480 of Irish potatoes, 890 of sweet potatoes, 1,000 bushels of bran, 130 to 160 barrels of eggs, and 15,000 to 26,000 pounds of butter.

Potash in Agriculture.

It is especially advisable to apply the potash compounds—not alone, but mixed with phosphates and nitrogenous fertilizers. In this way the best practical results have been obtained. Peruvian guano, ammoniated superphosphates, bone and fish, furnish nitrogen, phosphoric acid and lime, and, if superphosphated, sulphuric acid also. The potash salts supply potash with more or less sulphuric acid and magnesia. Such mixtures therefore would form "complete fertilizers."

The following are the most important practical conclusions concerning the use of the German potash salts as fertilizers:

1. Potassium, the basis of potash compounds, is indispensable to the growth of all our cultivated plants. It has at least one specific office in the nutrition of the plant, that of aiding in the formation of carbo-hydrates (starch.) Without a plentiful supply of potash in available forms, full crops are impossible.

2. The German potash salts afford at present the cheapest and most available supply of potash for fertilizers. They supply also more or less magnesia and sulphuric acid, which are essential ingredients of plant-food, and sometimes deficient in our soils, and of sodium and chloride compounds, which latter may be beneficial or harmful, according to the circumstances of their use.

3. The higher grades will be most profitable for use in this country, because they furnish the most potassium with the least admixture of inferior materials on which costs of freight and handling must be paid. The chloride, (muriates) with 60-84 per cent, of chloride of potassium, and the sulphates, with 70 to 80 per cent. of sulphate of potash, or the sulphate of potash and magnesia, with 54-57 per cent. of sulphate of potash, are to be especially recommended.

4. For potatoes, sugar-beets or tobacco, the sulphates are preferable; for other crops, the chloride, which are cheaper, are equally good.

5. In order to secure uniform diffusion through the soil, the potash salts should be applied as long as possible before the crop is sown. It is well to mix with earth, or to compost, before applying, especially if used shortly before sowing the seed. And, in general,

potash salts are well adapted for composting with muck, earth stable manure, phosphates, fish and the like.

6. The best results are generally obtained by using potash salts not alone, but with other fertilizers, as superphosphates, guanos and fish. Mixtures of these latter with potash salt form "complete fertilizers." The proper use of potash salts is as adjuncts to other fertilizers.

7. From 200 lbs. to 400 or 500 lbs. per acre of higher, and 300 to 600 lbs. of the lower grades are appropriate quantities.

8. The question of the need of potash in a given soil, can be best decided by actual trial. It will be generally advisable to test the question by experiments on a small scale, before making large purchases.—Prof. W. O. Atwater, in *Report of Connecticut Board of Agriculture*.

USEFUL FORMULAS.

Hon. Levi Stockbridge, Professor of Agriculture of the Massachusetts Agricultural College, Amherst, publishes the following formulas, by means of which the farmer may compound his own fertilizers, and thus save to himself large amounts now paid to those who make a business of preparing these phosphates:

To produce 50 bushels of corn *more* than the natural product to the acre, use:

Nitrogen, 64 pounds, in the form of sulphate of ammonia;

Potash, 77 pounds, in the form of muriate of potash,

Phosphoric acid, 31 pounds, in the form of muriate of super-phosphates.

To grow one ton of hay to the acre *more* than the natural product, use:

Nitrogen, 36 pounds, in the form of sulphate of ammonia;

Potash, 31 pounds, in the form of muriate of potash;

Phosphoric acid, 12 pounds, in the form of super-phosphate.

To produce 100 bushels of potatoes per acre, and their usual proportion of tops *more* than the natural proportion of the land, and other quantities proportionally, use:

Nitrogen, 21 pounds, in the form of sulphate of ammonia;

Potash, 34 pounds, in the form of sulphate of potash;

Phosphoric acid, 11 pounds, in the form of super-phosphate.

To produce 25 bushels of oats and the usual proportion of straw per acre *more* than the natural product of the soil, and in proportion for other quantities, use:

Nitrogen, 10 pounds, in the form of sulphate of ammonia;

Potash, 31 pounds, in the form of muriate of potash;

Phosphoric acid, 8 pounds, in the form of super-phosphate.

To produce 1,500 pounds of dried leaf tobacco, with the usual proportion of stalk *more* than the natural yield per acre of land, use:

Nitrogen, 149 pounds, in the form of sulphate of ammonia;

Potash, 172 pounds, in the form of sulphate of potash;

Phosphoric acid, 16 pounds, in the form of super-phosphate;

Lime, 160 pounds, in the form of sulphate of lime (lime plaster);

These mixtures should be sown over the land broadcast when the ground is well prepared, before planting, and not put in the hills, so that the roots may seek the food and not concentrate and thereby cause the plants "to burn up."

WHITE CLOVER.

Every pasture should contain some white clover. It will afford more feed at certain times of the year than any kind of grass or clover. It will not flourish on damp soils or those that are very poor. It will do very well in partial shade, as a grove or orchard, but to make the largest growth, and reach the highest excellence, it should be sown where it will have the advantage of full sunlight. It is easy to secure patches of white clover in pastures by scattering seed in early spring on bare places and brushing it in. One pound of seed is sufficient to start white clover in a hundred places in a pasture. The disposition of this clover is to spread by means of the branches that run along the surface of the ground and take root. Having secured a sod a foot square it will soon extend so as to cover first a yard and then a rod.—*Ex.*

Irrigation and Deep Plowing.

These important questions were discussed at a late meeting of the American Institute Farmers' Club, in New York. It was stated by Mr. Peter Henderson, that he raised an acre of Broccoli, which he irrigated with water from a hydrant whenever the weather was dry. From this land three thousand dollars was realized; without the water he doubted if the crop would have yielded one thousand dollars.

From this subject the discussion turned on deep and shallow ploughing.

Mr. Henderson remarked that he was an advocate of deep ploughing. In New Jersey we pay one hundred dollars per acre rent, which we could not pay if we ploughed shallow. Some years ago the Dutch farmers ploughed five or six inches deep, but they have all gone, and the places are now occupied with Scotch, Irish and English gardeners, who plough deep.

Mr. N. Halley.—"If you want good crops, you must plough deep, and manure well."

Dr. Trimble.—I have seen some of the largest crops of corn I ever saw, raised by farmers who advocate shallow ploughing; instead of burying the manure it is placed just where the roots can take it up.

Mr. Henderson.—We cover the ground with four or five inches of manure and turn it in; if you examine the ploughed land you will not find the manure at the bottom, but distributed all the way down.

Weight of Forest Trees Seeds.

W. W. W. Johnson, nurseryman of Central Lake, Mich., gives the following as the number of seeds of the following varieties contained in a pound:

American beech,	1,050
American arbor vitae,	330,000
Balsam fir,	45,000
Basswood,	3,000
Hemlock spruce,	80,000
Soft Maple,	5,000
Sugar Maple, (hulled seed)	3,200
White birch,	700,000
White, or black ash	3,500
White elm	8,000
White pine,	15,000
Whit spruce,	170,000
Yellow birch,	450,000

Live Stock Register.

For the Maryland Farmer.

GROWING STOCK.

The present depression of the times which has its effect upon farm operations as well as upon all kinds of business, gives little encouragement to any particular branch of farm husbandry. Prices for all farm products range low, and there is a want of confidence in the near future that witholds from any extensive operations. Many farmers, with the prevailing difficulty in disposing of their cultivated crops at remunerative prices, are reducing the acreage under cultivation, and giving attention to those branches that are less laborious, and are employing their surplus time in the general improvement of the farm. It has always been claimed that among the important pursuits of the farmer that require less attention and usually have produced very favorable results, is the production of hay and the growing of young stock, both of which should, in fact, go hand in hand, for stock must have good pasturage for summer, and a sufficient quantity of feed for winter. And although the feeding of hay may be greatly supplemented by the feeding of grass, there should be a certain amount consumed as a natural animal food and coming directly from the farm. Having, then, these considerations, average pasturage, and fields for the production of hay, the farmer is in the condition to engage in the growing of stock.

In these times, with the diversity of breeds that exists, besides some excellent natives and various crosses, one of the questions that comes in for careful consideration is—the kind to grow. And the determination of this depends upon a great variety of circumstances; in the first place, the purpose is—which the animal is to be put must be taken into account, such as, whether the animals are for veal, beef, or oxen; or for milk, butter or cheese, and second, what the pasturage and other conditions affecting their proper development are.

It is now generally conceded, that of the different breeds of cattle, there is a vast difference as to their adaptability to pasturage and winter keep; but more especially the former, in direction of their hardiness and susceptibility to thrive on average pasturage. This difference is often determined by the age and general structure of the animal; for while a pasture would support in the most thriving manner a breed of compact build and moderate frame, it would be wholly insufficient for any breed of larger frame with greater requirements for physical development. So, too, again, a different breed would be required for the production of "gilt edged

butter" from what would be if only milk or cheese were the object. And so, too, again, in the matter of oxen, the sentiment is unlike in different communities, according to some existing conditions that govern it; where the feed is ample a large frame is preferred, and therefore the breeds having this qualification are most sought, but in others the smaller frames, active intelligent, beautiful red Devons are preferred for oxen above any other breeds.

In the growing of stock, as in other directions, success depends largely upon the start; no farmer can expect to produce good stock unless his breeding animals are good, any more than he may expect to grow good corn from poor seed. Assuming, however, that the farmer has decided upon the breed that he prefers, much yet remains to insure success; the young animal requires the best of care, or else a mark will be placed upon it that time will fail to efface. In the first place, a few days will determine whether the calf is worth raising; if not, let it be fattened for the butcher, but if promising let it be taken from the mother when a day or two old and learned to drink, and then so fed with milk and occasional short feed as to keep it continually growing, nor should there be any suspension in this line during the entire growth of the animal, if full and perfect development is desired.

WM. H. YEOMANS,

Columbia, Tolland Co., Conn.

The Hereford Breed of Cattle.

As I have seen much in the *FARMER* of late about the different breeds of cattle, I thought I would say a few words about this noble race, which, I am happy to say, are largely on the increase both in this country and in England, and are the oldest established breed there. At present, the prices for Herefords rule higher in England than ever, whenever there is a sale of them in that country. At some of the late auction sales, cows sold at from \$685 to \$760 per head, and the bulls averaged \$283 each—one yearling bull bringing \$700. At another sale the yearling bulls averaged \$205 per head, and one bull that had taken fourteen first prizes in four years and the Champion Prize against all other breeds at the Royal Agricultural Show, together with six special prizes, brought \$1,330; and one three year old bull went for \$1,265. These prices will show the value which is put on the breed in their own country.

At the Maine State and New England fair at Portland last fall there were SEVENTY-NINE head of thoroughbred Herefords and about fifty grade cows,

which included three herds entered for the prize offered for grades—no other breed showing a herd; and these animals received a large share of attention. Of the working oxen and steers I should think two-thirds of all entries were Herefords and their grades, many of which took first prizes. The largest animal exhibited on the ground was a Hereford.

We find we can sell a pair of oxen or steers of this breed at from \$10 to \$25 per yoke more than other breeds of the same girth. I do not claim that the Herefords are the best dairy cows; but for the farmer, for oxen, beef and dairy qualities combined, and to cross with other breeds, none can excel the Herefords; and we find a ready sale for our young animals at good prices—all going to show that wherever seen and grown they are well liked.

J. S. HAWES.—*In Maine Farmer.*

Curing Sheep—Worrying Dogs.

Land and Water gives a plan for curing sheep—worrying dogs, which we think may be more effectual with young dogs than old ones. It says: "Wrap a narrow strip of sheepskin, that has much wool on it, round the dog's lower jaw; the wool outwards, and fasten it so that he cannot get rid of it. Put this on him for a few times daily, and there is a chance that he will become as thoroughly disgusted as ever you could wish, with every animal of the race whose coat furnishes such odious mouthfuls; but prevention is better than cure, pay great attention to your dogs morals during the lambing season. Dogs not led away by evil companionship rarely commence there depredations upon sober full-grown sheep. In ninety-nine cases out of a hundred, they have previously yielded to the great temptation of running down some frisking lamb, whose animated gambols seemed to court pursuit."

Large Sale of Hereford Cattle.—We learn that Mr. T. L. Miller, of Illinois, in April last, made sales to the amount of \$10,000, of young Hereford bulls, to go to Wyoming Territory. This looks like the Herefords were going ahead of all breeds for beef purposes. A cross of this breed upon Short-horn cows will, before long, no doubt, be made extensively, and result in great success. We are informed that Mr. Miller will use his fine young bull, "Seventy Six," bred by Hon. John Merryman, of Hayfields, Md., to serve the get of his present famous herd bull "SUCCESS."

A Good Dog Law in Connecticut.

In Connecticut there were four deaths by hydrophobia in 1876, seven in 1877, and two already this year. Among the above were several prominent citizens. There has been paid annually, \$12,000 to \$15,000, or more, for sheep killed by dogs, while thousands of others have been maimed but not paid for. Though many parts of the State are especially adapted to raising sheep profitably, the fear of loss from dogs has nearly put an end to this industry. The above condition of things led the State Legislature, recently adjourned, to pass, with unanimity, a stringent dog law, of which the principal provisions are the following:

Every dog kept must be registered on or before May 1st, of each year, and \$2.15 paid therefor, to the Town Clerk for each male dog, \$6.15 for each female dog. Every dog must *constantly* wear around the neck a collar distinctly marked with the register number and the owner's name. Every dog not so licensed and collared, is to be killed, and \$1 bounty is paid for the killing. Any person keeping an unregistered dog may be fined \$7, or imprisoned 30 days, or both; and it is made the duty of Grand Jurors and all other prosecuting officers, to prosecute any violation of this act. All damages done by dogs to sheep or lambs, or cattle, are to be paid for by the town, and collected in full from the owners of the dogs. Any person killing a registered dog, unless such killing is justifiable for the protection of life or property, is liable for the value of the dog, as established by competent evidence, and to a fine not exceeding \$7, or imprisonment not exceeding 30 days, or both.—*American Agriculturist*.

We verily believe that the time has come when every voter should make the Dog Law a controlling question in casting his vote for a legislator. In vain have the press and people cried out for a Dog Law. Common sense demands it—reason asserts the need of protection from sheep-killing dogs. Yet our legislators will do nothing to relieve the people. At the coming Legislature, let the above law be enacted and put in operation immediately, if not sooner. The tax is none too high. A man who can't pay the tax is unable to have a dog.—*Georgia Central Weekly*.

English Discrimination in Beef.—The quotations at the wholesale London market, on the 21st of March last were, Hereford beef 17 $\frac{3}{8}$ cts. to 18 $\frac{1}{4}$ per lb.; Short-horn beef 15 $\frac{7}{8}$ cts. to 17 $\frac{7}{8}$ cts. per lb. This is a fair indication of the London market for beef from the two breeds,

OUR LETTER BOX.

For the Maryland Farmer.

AN INCIDENT.

Mr. Editor.—I took occasion to send the March number of the MARYLAND FARMER, containing the excellent likeness of my good friend, John Merryman, Esq., of Hayfields, to an old and distinguished agriculturist—General James T. Worthington, of "Adena," near Chillicothe, Ohio. The General, in acknowledging the receipt of the Journal, says:

"This morning I received the March number of the 'Maryland Farmer,' in which I feel a peculiar interest, for about fifty two years ago, in May, 1826, I was the bearer of two shepherd dogs from Paris, France, a present from General La Fayette to Mr. Skinner, at that time editor (if I am not mistaken) of the chief agricultural paper of Baltimore."

Believing this little incident will interest your readers, I remain, Very faithfully yours,

JOHN MORRIS, M. D.

Baltimore, May 17th, 1878.

Cucumber Catsup.—Will the Editors of the MARYLAND FARMER, or some lady readers, publish in your columns, a good and particular recipe for making cucumber catsup that will keep well.

JENNIE.

Gentlemen.—Would you recommend wood ashes for fertilizing fruit and ornamental trees?

Respectfully, M. ST. DENIS,

Baltimore, Co., Md.

[Yes. Wood ashes contain all the inorganic ingredients which growing trees extract from the soil, and in consequence, are justly regarded as the best fertilizers for apple pear, plum, peach, &c., and for forest or ornamental trees. If moistened with strong brine they would be still better for fruit trees. Soap-suds have been found first-rate for peach and quince trees.—EDS. MD. FAR.]

Edible Sarsaparilla.—Rev. M^r. Loomis writes us from San Francisco, under date of 24th of April, that sarsaparilla *shoots* should be cut when young and tender, (like asparagus,) and being cut fine, eaten with salad dressing; or it may be cooked with asparagus, and it is also good as a pickle. He says, also, that the Japan Persimmon requires no sugar in drying; they are cured like figs—their own sugar preserves them.

Early Strawberries.—A friend writes us, that Mr. Crogan, a skillful market gardener in the strawberry region of Anne Arundel county, near Baltimore city, shipped to New York, on the 10th of May, a large lot of strawberries. Something may be due to the unusual earliness of the season.

Pear Blight.—W. W. Woodruff, of Griffin, Ga., writes for Dr. Brainerd's Essay on "Pear Blight," and says, "My Bartlett pears are blighting badly, and other sorts not affected. As yet, I know of but one remedy for pear blight, and that is, promptly plant another tree when the old one is dead."

[Such perseverance and pluck is commendable.—EDS. MD. FAR.]

THE MENNONITE GRASS-BURNER.

BY PROF. J. D. BUTLER.

No house in Washington is such a Japanese gem as the house of General Horace Capron. This gentleman going to Japan in 1871, took with him his carriage and horses. He was soon requested to lend his turn out to the emperor, and then invited to the palace, where his majesty said to him: "Sir! I have sent for you to thank you personally for introducing such animals into my country. I never knew before that they existed on the face of the earth." The General was then employed to put up a flouring mill,—as bread was no less unknown than horses to the Japanese. Nor were his rolls less welcome than his roadsters. He also built a saw mill which cut twelve thousand feet daily, which was all that six hundred sawyers could do. Among other services he showed how to can salmon, and so rendered that fishery ten times more valuable than it had been.

He had his reward. Everything rich and rare that had been garnered up in the imperial treasure-house was lavished upon him, and he came home laden with spoils of the farthest East.

If republicans were as rich as the Tycoon, the Nebraskans would bestow a similar testimonial on the Mennonites who have settled among them. Those Russian exiles have introduced a variety of fuel which will prove as great a boon to prairie States as horses or mills to Japan. They have demonstrated that every farmer may find on his own homestead, if not a coal mine, yet whatever he needs to burn on his hearth.

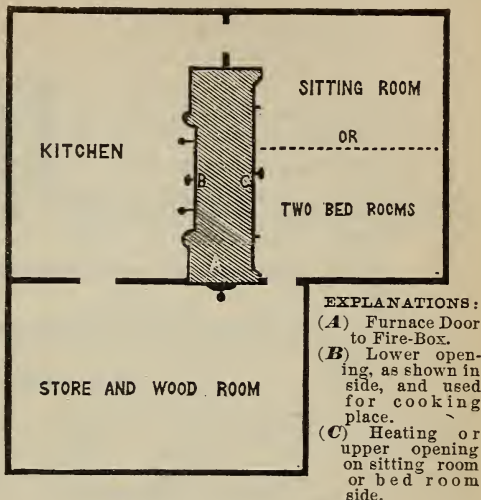
RUSSIAN REPORTS.

Though I was long ago a traveler in Russia, my attention was never called to the Russian style of heating until 1873. In that year, being on a western tour, I fell in with seven Mennonite deputies in quest of a new home for their people, who, for conscience sake, were forced to leave their old one on the Black Sea. We were together in various parts of Nebraska. Along the Republican and smaller streams we found a good growth of timber,—but every acre it stood on had been snapped up either by settlers or speculators

Much to my astonishment I discovered that my companions liked the country. In talking with German squatters whom we had called upon, we ascertained that the crop was twice as large as that where they came from. When I asked "what will you do for fuel?" their answer was: "Look around. We see it ready to our hands in every straw stack and on every prairie. Grass and straw are what we, and our fathers have always used." We

GROUND PLAN OF HOUSE,

Showing Location of Furnace.



passed one evening by a brick kiln in Crete which was fired up with coal. They remarked that they could burn brick without either coal or wood.

THE MENNONITE HEATER.

The grass furnace or stove is nothing costly, or complicated, or likely to get out of order. On the other hand it is a contrivance so simple that many will say of it as one man did when he first saw a railroad track: "No body but a fool could have thought of so simple a thing!" In a word, as the Irishman made a cannon by taking a large hole and pouring iron around it, so the Mennonite mother of food and warmth is developed by piling brick or stones round a hollow.

CONSTRUCTION.

The material used for the Russian furnace seems unimportant. Some employ common brick, others stone; one builder told me he preferred to mix one part of sand with two of clay.

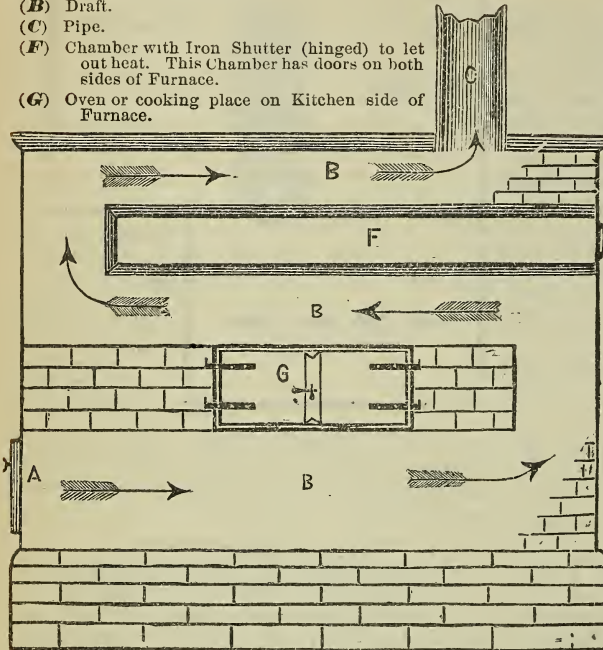
In his judgment this mixture retained the heat longest for radiation through the house. The position of the furnace is naturally as central as possible, because heat tends to diffuse itself on all sides alike.

Furnaces will, of course, vary in size with the size of houses. A good model is that shown in the diagram. Its length is five feet, its height six, and its width two and a half. The bricks employed are about six hundred, unless the walls be of extraordinary thickness. The structure may be said to have six stories. 1, the ash-box; 2, the fire-box; 3, the oven; 4, smoke passage; 5, hot air chamber; 6, smoke passage either to a chimney or to a drum in an upper room.

SIDE VIEW OF THE
"MENNONITE GRASS-BURNER."

EXPLANATIONS:

- (A) Furnace Door to Fire-Box.
- (B) Draft.
- (C) Pipe.
- (F) Chamber with Iron Shutter (hinged) to let out heat. This Chamber has doors on both sides of Furnace.
- (G) Oven or cooking place on Kitchen side of Furnace.



the Missouri, my feeling was, "what a corn and wheat growing capability here runs to waste! What myriads of buffaloes too have been shot merely for the petty dainty of their tongues!" So now in the light of Mennonite experience, many a Yankee in Nebraska sees that he has thrown away a cooking and warming power that had millions in it. He long ago laughed at his father smothering bees in order to secure their honey—and at his neighbor who put into his stove the corn which he might have sold, the same year for a dollar a bushel. He now laughs with the other side of his mouth at himself for burning out doors that prairie produce which, if burned in doors would have saved him many a dollar too. He who laughs will need no preaching to make square his practice in the matter of cookery and house-warming according to the Mennonite plan. His faith will be stronger than ever, that the Providence which created quinine, where chills prevail, as well as perfumes where negroes are most numerous, and provided buffalo-chips for the Indian in the far west, has there also furnished fuel for the civilized settler, "grass of the field which to day is, and to-morrow is cast into the oven,"—a gift which, if he makes full profit of it, will be sufficient for all his needs.

Straw and old prairie grass have been

Many questions have been asked me as to the size of the fire or fuel-box. Its length is about four feet, its width and height, each, about a foot and half. It is asked, 'How is the grass pressed or prepared for the fire-box?' It is thrust in with a fork as one would throw fodder into a rack. People suppose they must be putting in this fuel all the time. This is not the fact. At the house of Bishop Peters, (48x27 feet), which is a large one for a new country, the grass or straw is pitched in for about twenty minutes twice, or at most three times, in twenty-four hours. That amount of firing up suffices both for cooking and comfort.

It will be observed that the heated air strikes the oven, and also the reservoir of hot air both above and below, and that no particle of hot air reaches the chimney till after turning four corners. It works its passage. The iron plates, doors, and shutters are such as any foundry can furnish. They are inexpensive. In a case where I inquired the cost, it was five dollars.

PRESENT USE—PROSPECTIVE UTILITY
 Near a score of years ago when I first pushed west of

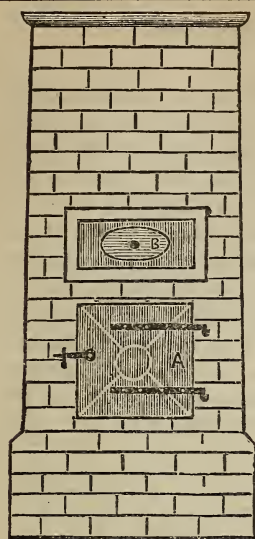
thought as useless as grave stones after the resurrection. But the recent utilizing of them is in keeping with the spirit of the age,—with developing patent flour best suited to human uses from that part of wheat which had been the food of hogs, and with planing mills so contrived that they feed their boilers with their own shavings.

Many Nebraska Yankees were made happy last winter, thanks to the Mennonites stove. More will be next winter. That household blessing to an outsider seems capable of little improvement. But the Yankee will improve it, for he has improved every thing else he has borrowed—every thing from watches to steam engines, ships, and even religion. In fact, his betterments in the last article are said to be as manifold.

"As if religion were intended

For nothing else but to be mended"

Thus Yankee cuteness may render the Russian stove simpler, smaller, cheaper,—of better material,—of more elegant design,—of more economical combustion. But as now used by Nebraskan Mennonites, it is worthy of all acceptance by every prairie pioneer. A Hibernian hearing of a stove that would save half his wood; said he would buy two and save the whole. The save-all that he was after, he would have found in a Mennonite grass-burner.



END VIEW OF THE
"MENNONITE GRASS BURNER."

EXPLANATIONS:

- (A) Furnace Door to Fire-Box.
(B) Cooking place or Oven. This opening
sometimes omitted.

Making and Beautifying Roads.

COUNTY ROADS.

Nothing adds more to the beauty and prosperity of a county or village, than good roads, and yet road-making in most sections of our country seems to be but little understood, and generally, those who are entrusted with their superintendence know as little of the science of road-making as they know of the character of the man in the moon, or the geography of Central Africa. As a rule, our country roads



FLAT AND ROUNDED ROADWAYS.

are double the width necessary to accommodate the travel, usually sixty-feet, while only about twelve or fifteen feet are available for the purpose of travel. No attempt is made to carry off the water, but the road is built out of the water by scraping up a pile of earth into the center, leaving deep ditches at the sides, and these, during the spring and autumn, are filled with water, and in the summer adorned with the fragrant flowers of the Canada Thistle and other pretty but unwelcome guests, which supply the neighboring fields with abundance of seed, without expense or pleasure to the farmer or profit to the seedsman. On the top of this ridge the driver carefully and painfully picks his way, skilfully avoiding the ditch on either side. What is generally called "improving" a road, is hauling a little more soil from the ditches and piling it up in the center of the roadway, and when

thus "improved" it looks better fitted for an iron bed than a highway. Our country roads are more than twice the width of English roads, but with us not more than a fourth of the space is fit for use, while every part of the English road is available.

In making a road the first thing necessary is to secure drainage. It is much easier to make a way for the water to run down hill than to pile up the earth till it reaches a line above the water. The material best for a road is somewhat different from what we should choose for garden soil. Gravel or broken stone, something that will not make mud in a wet season, should be used for the road if it can possibly be obtained, even at considerable trouble and expense. If good drainage is secured, and the proper material used, there is no necessity for having the roadway so rounding as to make it unpleasant for travel; just sufficient fall to carry off the surface water is all that is necessary or profitable. If a road is made very rounding, all teams are of necessity compelled to keep to the center, and it is soon worn into ruts, there being only one track; but if a road is made nearly flat every foot is used, and it wears evenly, and no ruts will be seen. Our little engraving will illustrate this point. Every inch of a road should be kept in perfect order, and if we cannot afford to keep a road of sixty feet in good condition, let us be content with one of thirty or even twenty, and fortunately no more is needed. Twenty feet will allow two teams to pass easily. Such roads would look narrow and contracted, and disfigure the landscape, some may think, but this is a mistake. When visiting the Isle of Wight, England, we were greatly delighted



with a narrow, country road, between Ventnor and Sand Rock. It was not more than twenty feet in width and as smooth as a floor.

We give our readers the above sensible article from Vicks Illustrated Magazine and commend to the study of every one who desires to have good roads. This is the time of the year when roads are usually attended to and we hope that supervisors of public roads will profit by the instructive suggestions of Mr. Vick.—*Eds. Md. Far.*

Never keep your cattle short; few farmers can afford it. If you starve them they will starve you.

The exports of American cheese were nearly double the past year what they were in 1876.

HORTICULTURAL.

Garden Vegetables.

For the successful cultivation of garden vegetables, the use of chemicals and minerals is much better adapted than that of animal excrements or stable manure to supply in sufficient abundance and in the most available form those necessary constituents found wanting in soils, or abstracted slowly from those long under cultivation by successive crops.

There is a marked difference to be observed between vegetables grown upon soil where chemicals and minerals are used and those where stable manure is employed, the former being less watery, more solid, of better quality, texture and flavor.

Pig's dung is characterized by an exceedingly unpleasant odor, which when applied to the land it imparts to the crop, and especially to the root crops which are manured with it; even tobacco when manured with pig's dung is so much tainted that the leaves subsequently collected are unfit for smoking.

Sickness resembling typhoid fever has been caused in horses and cattle, pastured on land where sewage was used, and may not vegetables grown in soil where effete matter is used, be one reason for the prevalence of this disease? If so, it is at once prevented by removing the cause, while by the use of the necessary chemicals and minerals adapted to the various crops; no loss is sustained by the market gardens; rather are they helped to a strong and more vigorous-producing capacity of larger and better crops, and at a less cost than the use of stable manure entails.

Pastures, a portion being dressed with barn manure and a portion with chemicals and minerals, and some left undressed, and cattle turned in, they will seek the portion dressed with chemicals to the exclusion of the other parts; that portion dressed with barn manure being entirely neglected. Animals are subject to all the dangers which affect the health of human beings; thus, disease among cattle may spread unchecked through an extensive district from one seed-bed of pestilence and contagion, as we have seen in pastures on which cattle from Texas had been kept. The dreaded disease diphtheria springs from the growth of a nauseous fungi caused by offensive surroundings, a defective drain or badly conducted privy, and may not the milk of cows that are kept on such fields be contaminated, and thus rendered unfit for food, and be one cause of the mortality among children.

Bridgewater Mass.

ANDREW J. WARD

The Judas Tree.

I was to glad to observe the favorable notice of this tree which appeared in your last issue. Permit me to state some particulars of the oldest and largest Judas tree with which I am acquainted—probably the largest in England. It is growing at Bath, on the premises of an ancient chapel, called St. Mary Magdalene. This remarkable tree I should guess to be not less than 300 years old (the chapel dates several centuries back). It was probably planted in the first place as a wall plant against the gable end of the chapel, for the base of its trunk is close to the wall; the stem and head have been gradually drawn away from the building, and are now in a leaning position, being supported by one of the arms resting on the boundary wall adjoining the street. The stem girths 6 feet 1 inch at half-way up to the crown, at 10 feet up its head has evidently been cut off some years ago, in a rough and unworkmanlike fashion. Notwithstanding the mutilation, however, three or four upright branches have shot out of the crown, and are now from 12 feet to 15 feet high. This specimen, although so old, still forms an attractive object every spring, when covered with its little clusters of pea-shaped, gay-colored flowers. The origin of the name Judas, applied to this tree, so far as I am aware, unknown. It is said to have been given it by Gerard, who stated that 'this is the tree whereon Judas did hang himself.' It is indigenous to Turkey, Greece, and Judea, where its flowers, owing to their agreeable acidulous flavor, are highly esteemed for mixing in salads, and they are also frequently pickled for use in the same way when fresh flowers cannot be had. Its foliage is very distinct from that of most other trees in shape and color, the latter being bluish-green on the upper surface and grass-green underneath. When old, the Judas tree forms a broad, round, flattish head, somewhat similar to that of an apple tree. The wood is not considered valuable, although it is hard and capable of taking on a good polish. As an ornamental tree in Spring, it ranks as one of the most attractive, owing to the singular and beautiful appearance which it presents when its old, as well as young, wood is literally covered with its purplish-pink blossoms clustered together in small bunches before a leaf is visible; and when associated with Laburnums, Lilacs, Flowering Currants, Azaleas, and other Spring-blooming subjects, it forms a charming contrast in color, blooming as they all do, at the same time. The Judas tree is also well suited for planting on a lawn, either to form a standard bush as an isolated specimen.—

GEORGE BERRY, in *The London Garden*

An Olio For our Readers.

The oldest Polled Angus or Aberdeen herd of the present day—with the exception, perhaps of the Ballindalloch and Portlethen ones—is owned by Mr. Alexander Bowie, Scotland, whose successes in the showyard for many years, and whose skill as a breeder as well as a judge, are well and widely known. The herd at Mains of Kelly dates back over sixty-eight years, having been started by the present tenant's father in 1810; and since 1835 Mr. Alexander Bowie, has, on his own account, taken a keen interest in the breeding, rearing, and improving of Doddies.—*North British Agriculturist*

The amount of pine lumber timber left standing in the forests of the timber States is said to be 225,000,000,000 feet, but it is only a question of time when this will be exhausted, if the work of consumption and destruction goes on, without greater efforts to provide for the renewal of the supply.

GIANT HORSES.

The Maysville (Ky.) *Bulletin* says that Ed. Morton, of Aberdeen, Ohio shipped to Boston lately a lot of fine horses, among them two grays, four years old, twenty hands high. The two weighed 4,500 pounds.

Age makes us not childish, as men say; it finds us still true children.

A Baltimore firm put up 1,400,000 cans of oysters last year.

The United States annually ships over 100,000 boxes of clothes pins to England.

Comfort in cows promotes secretion of milk, hence groups of trees in a pasture are invaluable during hot weather, and entire lack of trees should be supplemented by artificial shelter of some kind.

The cost of the Paris Exposition of 1878, is estimated at 35,313,000 francs or about \$7,062,600.

According to the Northampton, Mass. *Gazette*, Wm. S. Douglas, of Greenwich, has a very remarkable cow. It is stated that she gave in the month of June one thousand three hundred and ninety-two quarts of milk; the most she gave in any one day was fifty-two and one-half quarts. She averaged through the month forty-six and two-fifths quarts a day; at six cents a quart the milk would bring \$33 52

Combat all thy discontent through prayer, every care through faith, every fear through hope.

Stories heard on a mother's knee are never wholly forgotten—a little spring that never quite dries up in our journey through scorching years.

No animal is so extensively diffused over the globe, or increases so rapidly as the hog. Marshall Vauban calculated that the produce of a single sow in ten years, assuming six pigs at a litter, would increase to 6,434,130 pigs, or as many as any of the chief European States could support. If this calculation were carried on to the twelfth generation we should find that they would fill all Europe with a supply, and the sixteenth the entire globe.

USEFUL TABLES.

To measure grain in the bin, multiply the length, breadth and height together to find the cubic feet; divide this product by 56, and multiply the quotient by 45, and the result will be struck measure.

To measure corn in the crib, multiply the cubic feet by 4, and divide this product by 10; the result will be shelled bushels.

Gunter's Chain Land Measure.—7.92 inches constitute 1 link; 100 links, or 66 feet, 1 chain; 80 chains, 1 mile. A square chain is 16 square poles, and 10 square chains are one acre, 4 rods are 1 square acre, each containing 1,210 square rods.

An English acre is a square of nearly 70 yards each way; a Scotch, of 77½ yards, and an Irish, of 88½ yards.

ASPARAGUS PAPER.

According to the *British Mercantile Gazette*, an excellent paper can be made out of the white ends of asparagus, which consist entirely of tough fibers. The material is adapted to the production of the finer kinds of writing paper.

Showing the results of scientific farming, while Austria produces on one square mile 3,796 head of stock, Prussia, within the same limits, raises 5,527, France, 5,970, Great Britain, 11,447. In Belgium, where agriculture is most naturally pursued, a square mile produces nourishment enough for 7,345 persons, whereas in Poland the farming produces food for only 2,229 persons per square mile, and, taking the world at large, a far less average than this is obtained.

MAINE IS THE STATE TO UNHITCH MATRIMONIAL TRACES.—In Kennebec county of that State, at a late session of the Supreme Court for that county, fifteen divorces were granted. Well done for the land of steady habits. The "Maine Liquor Law prevails there."

Law and equity are two things which God hath joined, but which man hath put asunder.

The rich find relations in the most remote foreign countries; the poor not even in the bosom of their own families.

The integrity of men is to be measured by their conduct, not by their professions.

THE MARYLAND FARMER,

A STANDARD MAGAZINE.

DEVOTED TO

Agriculture, Horticulture & Rural Economy,
EZRA WHITMAN,

Proprietor and Editor.

COL. W. W. W. BOWIE, Associate Editor.

141 West Pratt Street

BALTIMORE.

BALTIMORE JUNE 1, 1878.

TERMS OF SUBSCRIPTION

One dollar and fifty cents per annum, in advance
Five copies and more, one dollar each.

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1/2 " 12 "	70 00
1/4 " 6 "	40 00
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Cards of 10 lines, yearly, \$12. Half yearly, \$7.

Collections on yearly advertisements made quarterly, in advance.

CLUB SUBSCRIPTIONS.—Any one who chooses to get up a club of ten, and sending us *ten dollars* will have a copy gratis.

In clubs of five or more, \$1.00 each; and names may still be added to the clubs already made up at the same price.

FARMERS! WRITE FOR THIS, YOUR SPECIAL JOURNAL, AND INTERCHANGE VIEWS WITH YOUR FELLOW FARMERS.

☞ Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors and suggesting to them to subscribe for it.

To POSTMASTERS—You will see that the subscription price of the MARYLAND FARMER is \$1.50 per year; but you will be allowed a commission of 50 cents on each subscriber that you will send us; that is, send us \$1.00 and keep 50 cents on each.

☞ Now is the time to subscribe and advertise, when the year is young, and when we are sending out hundreds of specimen numbers of our journal, that it may make its acquaintance with new, and, we hope, be welcomed by old subscribers and advertisers.

FIFTEENTH VOLUME OF

THE MARYLAND FARMER

This is the sixth number of the 15th volume of THE MARYLAND FARMER; and we claim it has been published longer continuously, without cessation, by the same publisher, than any other farmer's journal in this or other States south of Philadelphia.

A popular magazine,—as attested by our subscription list, frequent kind letters from parties, and the notices of our brethren of the press in this and other Southern States,—and is also a *great advertising medium*, as shown by the numerous new advertisements in the present number.

During the present year, we shall allow nothing to prevent our making it superior to all former issues, and maintain beyond dispute its high character.

Its aim will be to admit nothing in its columns like Theory, unless based on science controlled by reason; nor anything called Practical, unless proved by successful experiments.

If our old subscribers will do us the favor to canvas for THE MARYLAND FARMER, by showing it to their neighbors and soliciting the subscriptions, they will confer a great favor on us, and we do not doubt, confer a greater profit on the new subscriber.

MAKE UP CLUBS.

To Clubs of five or more, with pay in advance, we will supply THE MARYLAND FARMER at \$1.00 each, per year.

Those who will send us \$2.50, during this month, shall receive two copies for the year.

Any one who will send us six dollars for six subscribers, shall receive a seventh copy for getting up the club.

These terms enable persons to get the Magazine at \$1.00 per year, postage paid.

YOUNG MEN!

It is an easy way to make money by getting subscribers for THE MARYLAND FARMER. Send 15 cents for Specimen Copies, and ascertain what Liberal Commissions we will allow.

ADVERTISERS.—While we are gratified to perceive from the large number of advertisements in the MARYLAND FARMER—increased monthly—that our journal is appreciated as a profitable medium, yet we are surprised that Farmers who have stock of all kinds for sale do not advertise more freely; merchants properly estimate the value of advertisements, while farmers lose hundreds of dollars by not doing as the merchants do. We have daily enquiries where poultry, eggs, sheep, cattle, horses, &c. are to be had, and at what price. We can not answer in all cases. It is true we have an agency ourselves for the purchase of such articles, but we would have our patrons deal personally with the owners, who advertise.

A SUGGESTION.

There are a few delinquents on our subscription list whom we would remind that "small favors are thankfully received" at this office, and with whom we are loath to part company. The publication of the FARMER is attended with a heavy outlay of cash for paper, labor and other expenses incident to the publication of a magazine of the magnitude of the MARYLAND FARMER. Our subscription is but \$1.50 to single subscribers and only \$1 to members of clubs, per annum, being one of the cheapest, and at the same time best journals of its character in the country. At an increased outlay it has steadily improved in contents and appearance. To those indebted to us, we would say, that an early remittance would be thankfully and duly appreciated.

ATTENTION! SUBSCRIBERS!!


As this month closes the first half of the year, we send our subscribers their BILLS, and we earnestly hope that each will take our hints in good part and remit forthwith. What is a trifle for each, when aggregated, makes a large sum to us. *It is grains of sand that makes the sea-shore.*

THE HON. W. C. FLAGG.—In the brief notice of his death in our last number, we omitted to state that at the time of his death he was Secretary of the American Pomological Society, President of the National Agricultural Congress, President of the Illinois Farmers' Association, and member of various other Societies—scientific and agricultural. For many years he held the office of Secretary of the Illinois Horticultural Society, and was horticultural editor of the *Prairie Farmer* until ill-health compelled him to relinquish work. Just before he died the Secretary of the Treasury appointed him, with other distinguished citizens of the Union, to constitute a Committee of experts to furnish information in regard to the Internal Commerce of the United States. Just when full of honors and usefulness his career was ended.

SPECIAL PREMIUM FOR BEST HOME-MADE BREAD.—We are authorized by Mr. J. ALBERTSON, Proprietor of the "Mansion House," Baltimore, to say, that, with the permission of the officers of the Agricultural Society of Maryland, he will offer a special premium of \$5, for the best home-made wheat bread, presented and made by any person other than a professional cook, or bread-maker, or baker. The premium to be awarded by a special

committee of three gentlemen to be appointed by the President of the Association. All specimens to be exhibited for competition on the first morning of the Exhibition at Pimlico, at the fall meeting of the present year. The committee to make their award before 3 o'clock of that day.

Bread being the staff of life, there is no equal to it in importance—no matter in what light considered—in the whole routine of the culinary department of the household. The young woman who excels in making bread, will be a great jewel in the matromonial crown. Young ladies go to work and aim to secure this prize and its high honors.

 Farmers should cultivate a taste for writing for their agricultural papers. The value of an agricultural paper does not depend so much upon the length and number of, and the talent displayed in its editorials, as the contributions from the pens of practical farmers. The editor may present his views upon any given subject, but the farmer would prefer to accept, rather, the views and opinions of his fellow agriculturist. So farmers let us hear from you often.—*Exchange.*

Hon. A. K. Syester, of Hagerstown, has consented to deliver the annual oration, before the Harford County Agricultural Society, in October next.

Horticultural Exhibition.

The monthly meeting of the Maryland Horticultural Society was held on 16th ultimo, at the Academy of Music. The display was very large and beautiful. Among the prominent exhibits was a large stand filled and tastefully arranged with wild flowers by Miss Julia Montague, niece of Henry Stockbridge. Edward Feast & Son had a large display of plants and flowers, also James Pentland.

A large number of persons attended the meeting. A paper was read on the construction and management of small greenhouses and the plants suited for them. The premiums were awarded as follows: Best fuchias, Cromwell & Congdon; second best, E. Hoen; best pansies in bloom, Jas. Pentland; second best Cromwell & Congdon; best geraniums, zonale in pots, Jas. Pentland; second best, Cromwell & Congdon; best geraniums, double flowering, J. Perot; best geraniums, variegated, Jas. Pentland; greenhouse and stove plants, R. W. L. Rasin; second best, E. Hoen; ornamental foliage plants, W. H. Perot; second best, R. W. L. Rasin; best rhododendrons, W. H. Perot; best orchids, C. H. Snow; second best, W. H. Perot.

Premiums given only to commercial florists. Best calceolarias, E. Hoen ; best hardy flowering shrubs, A. Hoen ; second best, W. D. Brackenridge ; best pair hanging baskets, A. L. Black ; best basket of cut flowers by lady amateur, Miss L. Martin, of Ellicott City ; best table design of cut flowers, A. L. Black ; second best, R. W. L. Rasin, and best collection of vegetables, R. W. L. Rasin.

Premiums for amateur and window gardening : Window plants, E. Kurtz ; best cut pansies, C. S. Kemp ; best geraniums, E. Kurtz ; flowering shrubs, W. B. Sands, and best hanging basket, Willie Feast.

The next meeting will be held on the second Thursday in June. As heretofore, the June meeting will no doubt be a great success, nearly coming up to in attraction, the great annual meetings.

LOSS BY FIRE.—We deeply regret to hear of the loss by fire of the large frame dwelling-house of our esteemed correspondent, Dr. A. P. Sharp, of Balto., on his Rock Hall farm in Kent county. We learn that it was not insured. The *Kent News* says : there are few places in Maryland around which cluster more interesting historic associations than Rock Hall, and the old mansion which has been burned. George Fox, the celebrated Quaker, in his diary published in 1672, (more than two hundred years ago) speaks of sailing up the Chesapeake and landing at Rock Hall, where he spent several days pleasantly. Gen. Washington, in his diary, also speaks of stopping at Rock Hall on several occasions, on one of which he states that he left Chestertown at seven o'clock in the morning, and after a pleasant ride of two hours found delightful shelter at the hospitable mansion at Rock Hall.—Thomas Jefferson, his writings, also speaks of being at the same place, as well as many others distinguished in the early history of the nation. Before the days of railroads and steamboats, and indeed for some years after, Rock Hall was the outlet and inlet for most of the travel between Chestertown and Baltimore.

OUR ACKNOWLEDGMENTS are due to the author, Gen. Horace Capron, for a neatly printed copy of his "Remarks before the Philosophical Society of Washington."

During 1871—1875, he was in the service of the Emperor of Japan, as a high Official to introduce there the most important improvements in American Agricultural Machinery ; best breeds of stock ; grist and saw mills ; re-clamation of lands ; railroads ; military tactics and the improved arms, &c. The incidents of his voyage, reception by the

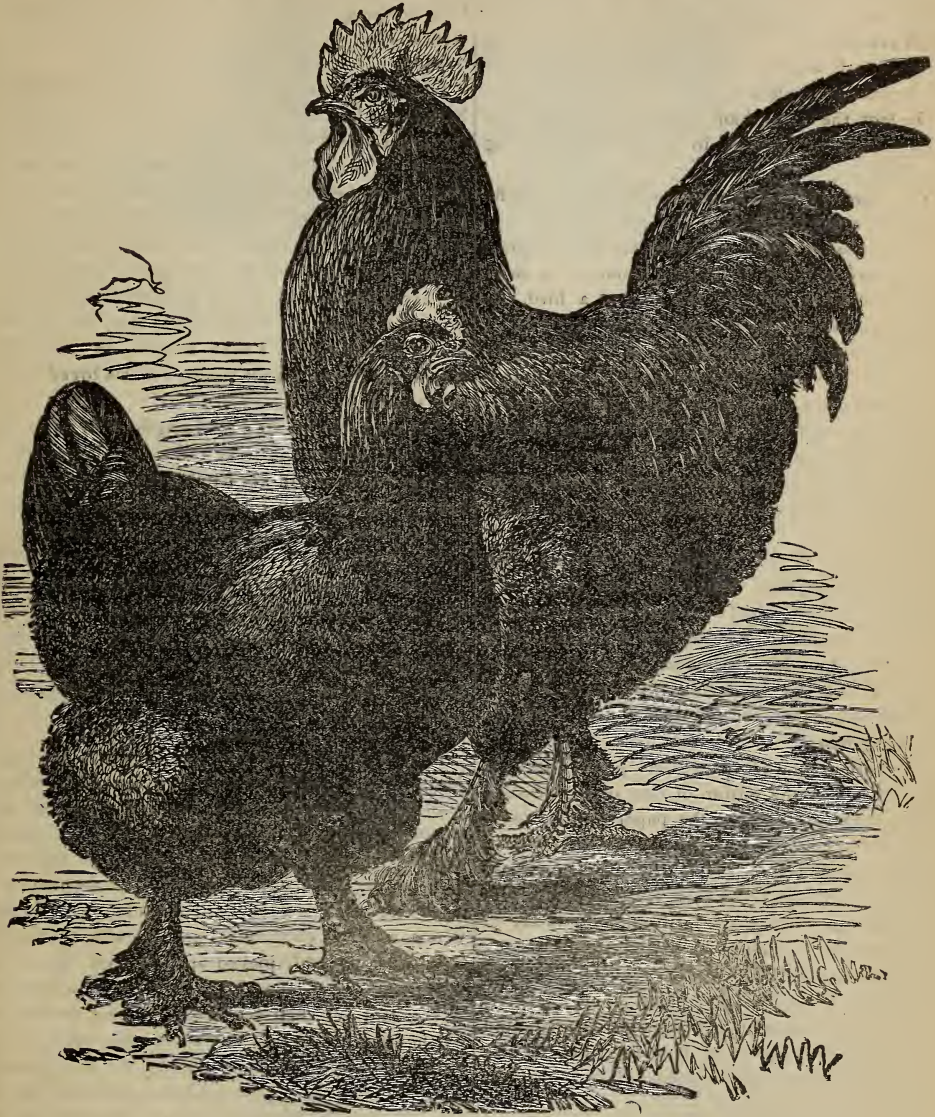
Emperor, customs of the people, and what works he accomplished are very interesting themes, discussed with modesty and ability in a clear pleasant style.

ACKNOWLEDGEMENT.—We return our thanks to the Rev. Mr. Loomis of San Francisco, California, for the fine root of edible Sarsaparilla sent us.—We followed his directions in planting it, which were, to treat it as asparagus and give it the same culture. We shall also bear in mind at the proper time to try it as he directs,—“cut when young and tender, and eaten as salad, or cooked as asparagus.” Both ways we shall try, and give our experience to our readers. How delectable to dine upon Sarsaparilla, our own growing, instead of paying tribute to the apothecary or the sarsaparilla—poppers ! What strange relations plants have to each other—this edible and the medicinal sarsaparilla are of the same family, and near cousins to the tender smilax, so fashionable of late to adorn ladies ball-dresses.

MARYLAND JOCKEY CLUB.—Notwithstanding rather unfavorable weather—the sports at Pimlico were all that could be desired, and the success of the meeting was greater than ever. The racing was *fine*—the number of horses great—the time made was fast—the crowd *immense*, and beauty, with fashion graced the meeting. Great credit is due the Officers of the Club, and to Major Ferguson in particular, for the admirable arrangements. At many future meetings may we and our friends be there to see ! Old Maryland always was, and still is, foremost in the field where any honors are to be won.

THE WHEAT PROSPECT.—Never for many years, was the prospect so flattering for a large yield of wheat as it was in this State up to the first of May. Since then we are sorry to say the chances are, that a very poor crop will be harvested in the larger portions of the State. Some say it is rust, some that it is joint-worm or fly, but we agree with those intelligent and experienced farmers, Col. W., of Carroll Co. ; Mr. H., of Anne Arundel ; Col. W., of Dorchester, and others who have visited our office lately, that the true cause is to be found in climatic influences, brought about by the uncommonly mild winter, early spring and then sudden cold, followed by wet weather in May, just as it was heading. This sudden calamity seems to have visited nearly all portions of the country, and yet speculators declare that the crop will be immense.

POULTRY HOUSE.



LANGSHAN FOWLS.

Imported and Bred by E. A. Samuels, Waltham, Mass.

The above illustration gives a good idea of the general appearance that this magnificent breed presents. It is a very valuable acquisition to the fanciers of this country, and it will unquestionably be in great demand,

Mr. Samuel in describing the Langshan, says :

In general appearance the Langshan somewhat resembles the Black Cochins, but it has a longer tail and larger comb ; the plumage is different, that of the Langshan being of a beautiful greenish-black color with metallic reflections like those on the wing of a beetle,

The shape is different, the breast of the Cochins being narrow and thinly meated, while the breast of the Langshan is as full as that of the Dorking.

The color of the legs and feet is quite different from that of the Cochins, the latter being tinged with yellow, while the legs of the Langshan are bluish-black, and the scales between the toes are of a pinkish-purple color.

In fact, the Langshan and Black Cochin are totally distinct breeds in every distinguishing feature.

The merits of the Langshan fowl may be briefly summed up as follows:

It possesses extreme hardiness, chickens hatched in January in England running about in the most severe weather without the loss of a bird. It matures more rapidly than any other breed, as I have proved by raising chickens of this variety in the same brood with Brahmas, Plymouth Rocks, etc. The great size that the old birds attain is accompanied with a full breast (yet the bony framework is quite small), and the flesh possesses a delicacy of flavor without the dryness and coarseness of texture so common to most of the other large breeds.

As prolific winter layers of good-sized, rich eggs, the Langshan hens will hold their own against all others, while they lack that intense desire to sit which is so essentially a characteristic of the Cochin. My experience in breeding these birds justifies me in saying, that, were I to be limited to a single variety, that variety would be the Langshan.

A gentleman who visited my poultry-yard at the request of the editor of one of our leading poultry journals writes to the paper as follows:—"They (the Langshans) show very clear peculiarities not common to the known varieties of Asiatics. They are all distinct *black* in color, without any tinge save that of the greenish-metallic lustre of their plumage, which is exhibited in both cock and hens in a marked degree; the light-purplish tint of the skin between the toes, upon all three, is peculiar; they are Light Brahma shaped, and not squarely built like the Cochins; and in size and weight they equal, for age, the largest average Cochins I am acquainted with."

The indications now are, both in Europe and this country, that the Langshans will have an immense popularity. Fabulous prices are paid in England and France for the birds and eggs; and the difficulty with those who are so fortunate as to have any is, not to be able to sell, but to have anything near enough to meet the great call for them.

As the Langshan succeeds admirably in France, it will no doubt prove a desirable breed for our

Southern fanciers. We understand that there are a number of persons in this country, who claim to have imported Langshans, and they are selling the eggs in great number throughout the country.—One man has a single Langshan hen, and he has ostensibly sold over one hundred dozens of eggs from her this season, at \$6.00 per dozen.

Of course those persons who bought the eggs have been swindled in a most atrocious manner, for unquestionably, not a single egg he sold was from that Langshan hen. Mr. Samuel cautions everyone to be on their guard, against buying bogus Langshan eggs. He says, "No one who intends to breed Langshans, it would seem, can afford to sell eggs at almost any price, for he could sell every chicken he could possibly raise, at a price that would pay vastly better than he could obtain for the eggs. I have refused an offer of \$24.00 per dozen, for all my eggs of this breed laid this season.

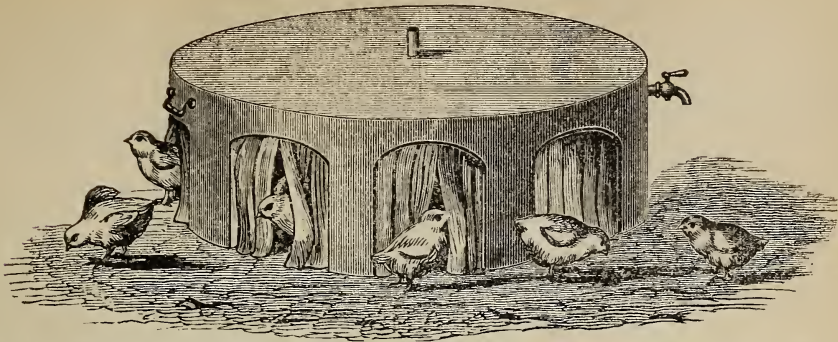
The eggs that are sold for Langshans by unprincipled dealers are Cochins', and a very large percentage of them will not hatch even at that, they being either from hens which are unmated, or else they are spoiled for hatching before they are shipped to the buyer's.

Never buy eggs of fancy fowls, unless you know all about the parties you purchase from, and on no account waste your money in buying counterfeit Langshan eggs, for there are no breeders in the country who can, for a few years at least, afford to sell the genuine.

BEST FEED FOR CHICKENS.—A writer in the *Maine Farmer*, says the best feed for chickens is hard boiled eggs chopped fine and mixed with bread crumbs and a little milk the first week; the bread crumbs and cracked corn and wheat soaked until pulpy, with a little green food for two or three weeks; then thick mush of oat meal, cracked wheat, and bits of meat. Feed liberally and yet only what is readily picked up, and feed often.—Fix a place where the chickens can run by themselves, and get their food without being troubled by the hens. The best way to arrange this is to build a box of laths covered on the top, and space between the laths for the chicks to run in and out. Give the chicks their feed inside this box or coop, and they will soon learn to run there when called.

But the best feed for growing chicks is sour milk; of this they may be fed bountifully and be greatly helped by it. Do not feed much corn or corn meal until you are ready to fatten. Give a fresh grass run as often as possible, if you cannot give a free range. Constant care and cleanliness are necessary in order to get the best results, and with these comes the greatest profit.

THE ECLIPSE ARTIFICIAL MOTHER.



There is as great a want felt for an artificial mother for chickens, ducklings, &c., as there is for a good incubator; in fact, it is very often the case that an artificial mother is needed for early chickens that have been hatched under hens, or for those which have been abandoned by the mother-hen in the midst of cold, inclement weather. I think it is the experience of every poultry-raiser that many times he would have been glad of something that would take the place of fussy, savage, careless hens.

The essentials in an artificial mother or brooder are: 1st, a provision for furnishing the proper heat above the chickens; 2d, a good method of ventilation; 3d, a perfect freedom from harboring places for vermin, and a simple arrangement of attachment by which the fleece or woolen lining may be removed and cleansed readily and at any time.

The Eclipse Artificial Mother meets all these requirements; and it is the simplest, most portable easiest managed machine of any for this use that we have seen. The heat may be supplied or withdrawn at any time, and its form is such that chickens brood in it with perfect immunity from the stifling and crowding which have been the bane of all the artificial mothers that I have seen.

Price, net, \$15.00. Each brooder will accommodate fifty chickens.

For the Maryland Farmer.

Sundry Poultry Matters.

Much has been said in favor of pure bred poultry, and still there is valuable space that can be filled with sensible and sound suggestions. In the first place every one who has tried pure bred's, not only Poultry but all domestic animals find that they are far superior to all "land pikes." For the reason as I have before stated, they have been bred with an eye single to improvement by watchful eyes and sound thinking heads for years perhaps.

Whereas those "land pikes" have in most cases been degenerating, "oh these many years." I know of hundreds, who do not even select the best of the bad, and in almost every instance, I hear them exclaim, "the big named hogs, chickens &c. don't pay." Now this is simply because they have never tried the experiment, and they are asserting that which they know nothing about. True it takes more to buy a good pig, calf or fowl, than it does to buy one of those "land pike variety;" but the latter are dear gifts to the receiver, for good, pure strains cost no more to feed and will give greater returns for the food consumed, and it is in the last pounds that the profits lay, as it takes the first to pay expenses. For instance it takes one and a quarter bushels of feed, to feed one pure bred fowl, that produces from 1.50 to 200 eggs per annum, at a cost of perhaps 75 cts. to \$1.00, while the "land pikes" lay no more than 50 to 75 eggs, at the same cost. In one case we perhaps cleared

expenses, (few will do that), and in the other cases we have a profit of from \$1 to \$1.25 per fowl. I speak from a careful observing experience, takes the interest of my fellow man in consideration. I get more eggs daily from 10 pure bred leghorn than I do from 18 common hens, which I keep for sitters, this being unavoidable at this time as they do not make the very best of mothers. A pure or grade Asiatic is far better if those are taken that are not extra heavy, I met a few days ago, a wide awake gentleman in this respect, and I have no doubt a No. 1 farmer in the person of Mr. O. Hammond of Royal Oaks, Talbot Co., Md., he informs me he uses the best pure bred Asiatic cock on his common hens, and the result is a magnificent table fowl, and a fine winter laying fowl, giving a larger percentage of flesh than can be attained in either the common or Asiatics. I of course inquired if he took the "MARYLAND FARMER," I received the expected answer, "oh yes!"

I find him awake to all kinds of good husbandry and a believer in good pure blood. I could say much more on this particularly important fact, but for fear of intruding on space I will close this communication by assuring all farmers that the time is not far distant, when they will see the importance of securing the best stock of every description, as well as the most improved machinery, and see the MARYLAND FARMER, and other good farm guides in every farmers household.

A. W. FRIZZELL,

THE DAIRY.

For the Maryland Farmer.

The Glades, and Butter-Making in the Glades.

Messrs. Editors:—I will endeavor to give you as near as possible, a description of the country and manner of making butter in the region known as the Glades. Somerset county, Pennsylvania, is the centre of the Glades butter territory, which takes in also portions of the adjoining counties of Pennsylvania and Maryland. Glades butter takes its name from this section of country which is called the Glades, and formerly in its pastures the beautiful Glades grass flourished; this grass is long, broad in leaf, and makes a beautiful meadow, but like all beautiful things of old times, it has given place to modern improvements, and now clover and timothy flourish in its stead.

Somerset county is situated between two mountain ranges—the Big Savage on the east and the Laurel Hills on the west, and its county seat—Somerset—a beautiful little town of about 2,000 inhabitants, stands on a high hill, about midway between the mountain ranges, and 40 miles westward from Cumberland, Md.

The Glades country is a nest of small hills and mountains, with very little level land, but its soil is very productive of grass and small grain. The country is peopled by a very hardy and industrious population, chiefly of German origin, and very courteous and hospitable to all visitors to their mountain homes. The country is thickly settled and the farms average 40 to 100 acres, and every farm has its cows, as many as it will feed, which is on an average of one cow to five acres; some few farms of larger size graze from 40 to 50 cows. The most conspicuous feature of these farms is the barn, which is usually the best and handsomest building on the farm, and is usually built on hill-sides, and the lower or ground floor used for stabling the cows and horses and is entered on the lower side, the upper portion is built so that wagons can drive into the second floor, entering on the upper side—the second floor being used for storing grain, wagons, and all machinery of the farm, and the third story is used for storing hay and all long food. The next most important building is the dairy house or room; sometimes it is a small house built alone, and often it is built under the dwelling house. These dairy rooms are all arranged so as to have a running stream of water through them, and if a spring is not convenient to the house, pipes are laid sometimes for long distances up the hills, so as to get a constant

flow of cool spring water through the dairy rooms. Around these rooms are arranged troughs, through which the water runs about 6 to 8 inches deep, and in these troughs the jars of milk are set for the cream to rise, after which it is taken off and placed in another crock, which is placed also in the water trough until sufficient quantity of the cream is collected for a churning. The cream is then churned and the butter taken off, and usually washed, (tho' some of the dairymen do not wash the butter, but only press the buttermilk out,) after being salted the butter is packed into closely coopered kegs, holding from 50 to 60 lbs. each, and after being filled the kegs are placed in the dairy room until sent to market, which is usually in the fall and winter. Ten to twenty years back the Glades butter was noted for its keeping qualities, which was owing to grazing on short pastures of hard native grasses, but by degrees the butter is becoming less and less valuable for its keeping properties, and this is due to the gradual improvement of the lands and the increased cultivation of clover and other soft grasses, which produce butter that will not keep sweet and sound for any length of time. The Glades district produces annually about 13,000 kegs of butter, and the average estimate of its value annually is about \$100,000. The butter-making is nearly all done by the wives and daughters of the farmers, and it is not often that a man is seen milking the cows in the Glades, and so it can be very correctly said to the credit of the women of the Glades that their labor in this line alone is worth one hundred thousand dollars annually, and if the women of some other sections which we know of—would go and do likewise—better times would come to them, and I think that lady who wrote to you inquiring when "Better times would come?" could find a better answer in the industry of these dairymen's families than any editor could give them.

Col. B., I think it will do you good to go up to Somerset next summer, where you can breathe the pure mountain air and drink pure rich milk, given to you by the handsomest and most hospitable dairy maids in America. Try it?

Respectfully, W. S. TEMPLE.

FROST ON THE 12TH OF MAY.—Worthy of record, after so very warm weather, is the heavy white frost that fell on the night of the 12th ult. After sunrise, we could rake it up like a young snow fall, with the toe of our boot on the platform of the Viaduct Station, at St. Denis, in Baltimore Co., Md.; but it did not kill many tender plants, yet put back all vegetation very much. That day neither strawberries or cream required to be placed in the ice-chest, and champagne was just at the right temperature, when taken from the cellar.

The Cultivation of the Soil—Its Good Effects on Mankind—The Currant—Its Qualities.

Address of Gen. La Fayette Bingham, before the Potomac Fruit Growers Association, at Washington, D. C., April 7th, 1878.

MR. PRESIDENT, LADIES AND GENTLEMEN :—The cultivation of the soil has ever marked man's social, moral and intellectual development, from his low and barbarous condition up to his present proud position, and high civilization ; and his material prosperity has ever been known by the condition of the soil on which he obtained his support.

The earth, it is true, was the abode of man in his rude and savage state ; and the game that played on its mountain side, and roamed through its valleys, and the large and small inhabitants of the waters, furnished him a meagre and precarious subsistence ; but it was not till the busy hands of intelligent husbandry touched its palpitating and trembling bosom, did its beautiful hillsides and long stretching vales bloom in grains, fruits and flowers.

The prosperity of a people, a state or nation, depends mostly on the cultivation of the soil. If its culture is intelligent and systematic, there is a high degree of state and national prosperity. In other words, where you see a people intelligent and refined, you there observe that the soil on which they live is in advanced state of cultivation. Take this picture for example : There is a farm with all the surroundings of a pleasant and comfortable home, having all the appearance of abundant crops of grains, fruits and flowers. Its beautiful fields give every evidence of intelligent husbandry. In other words, you behold the ample stores that supply all the material wants of a household ; now pass we into the house where dwell the individuals who have caused this outward appearance of plenty and abundance, and we here find mental, moral, and social culture and refinement, personal comfort and happiness. Go with me now, and we will visit those people, that make up that family over the way ; who support themselves mostly by fishing and hunting. It is true, that they wear the semblance of humanity ; but we observe no social, moral and mental culture, and fine sentiment there. The people are coarse and unmannerly, and it is most likely that they are unkind and cruel in their nature. If a crime is committed in the neighborhood they are at once suspected as the guilty culprits.

That the cultivation of the soil has an ennobling and refining influence over man's whole moral and social nature, is self evident to the observant

student of cause and effect. Having spoken briefly of the natural and general benefits, resulting from soil culture. We now approach the subject under immediate consideration, namely : The cultivation of the currant, and its varied relations to the general economy and welfare of man. The currant is a native of northern latitudes, and was first discovered in the northern countries of Europe. It is a hardy plant, and in its original native state, requiring no particular cultivation. It grows in almost any ordinary soil where small trees and shrubs flourish, but, it is best in soils, rich in Silica, Allumina and Calcium.

The word currant is said to be a corruption of Corinth, and is so named because of its resemblance to the shrub that bears the Corinth raisin, and its berries to that fruit. It is of two generic species, the red and white, and these have been multiplied into many varieties by grafting and crossing, and each improved by cultivation.

The value of a fruit depends on its chemical constituents ; and in this respect the currant stands high on the list of fruits, most prized for beneficial results. Sugar predominates in the white, being 6-61 per cent., while in the red, it is 4-78 ; but the acid in the red is most abundant, being 2-31, while in the white it is, 2-26. The albuminoids—very valuable constituents, predominate most wonderfully in the white, being 77 to 45 in the red, while in gum, combined acids and pectin ; the red has, 28 to the white, 18 per cent. In soluble mineral matter they are equal, having, 54 per cent. From this analysis, we come to the conclusion that it a valuable fruit, even if we did not know that fact from actual experience ; for the citric, tartaric and malic acids, which are abundant, are well known valuable constituents, and very beneficial to the physical economy, while the sugar predominates over all the other constituents combined, and its usefulness is too well known, to require further remarks here. It will be at once seen, that the white currant is by far the most valuable.

I am not able from my own experience to say, to what extent the red and white currant may be improved by intermixture and crossing in its cultivation ; but the well known law of development, it seems, should manifest its beneficial results here, as well as in other departments of the vegetable kingdom.

Of the different species I will not speak at length, though it is important to know the better varieties to raise ; but I ask members who have personal experience in this part of the subject, as well as the modes of culture, preservation and varied usefulness of the currant,

A variety, known as the Attractor, originally from France, is a large white fruit, very highly prized; and the Champagne of a flesh color, an intermediate or crossing of the red and white, is of a fine rich flavor. The Doin whitish yellow, Dutch red, transparent Victoria, white Clinton, white Antwerp, white Dutch, are all very large and luscious, while of the black variety, we have the common black which is well known, and the Naples, a large beautiful fruit, often measuring a half an inch in diameter.

The currant jelly seems to be the most desirable manufacture of the fruit, as it is easily and cheaply made and put up, and it is truly a most delicious article for the table.

In conclusion, permit me to add, most truly is it said that the earth is the habitation of man. He cannot long survive on the elements of the air nor water. True air contains oxygen and nitrogen, and water oxygen and hydrogen, with the compound elements, chlorine, bromine and iodine; and sea air is impregnated with ozone; but in the earth or soil we have some 40 elements, simple and compound, all well understood, as important chemicals constituent of the physical organism. Now as man becomes better acquainted with the nature and adaptation of the things, that confer health, strength and comfort to his well being, the better will he fulfill the great purposes of his existence; and the more noble, and grand does he appear on the stage of life, winning and receiving the well merited praise of his associates in the broad field of human industry.

THE AMERICAN ASSOCIATION OF NURSEYMEN, FLORISTS, SEEDSMEN AND KINDRED INTERESTS. will hold its 3d annual gathering at Rochester, N. Y., on June 14th, 1878, to last three days. The objects sought to be obtained are of great importance to the parties concerned, as well as those who feel any interest in fruits, flowers, trees, &c.

Desolating Forests.

Within ten years, no less than 12,000,000 acres of forest have been cut down or burned over in the United States. Much of the timber is used for fuel, twenty-five cities being on record as consuming from 5,000 acres to 10,000 acres each. Fences use up much timber, and railway sleepers require the product of 150,000 acres per annum. The amount of pine and lumber timber yet standing in the forests of the timber states is estimated at 225,000,000,000 feet. The sum of 144,000,000 dollars is invested in the timber industry, employing 200,000 men.

For the Maryland Farmer.

HISTORY OF AGRICULTURE.

BY PROF. J. D. WARFIELD A. M.

Messrs. Editors:—It is only when we come down to the last century that a foundation is laid in Agricultural Science. There is a reason for this slow growth in the rule of political economy that "demand and supply regulate each other."

A glance at historic figures demonstrates the proposition that agricultural wealth is in direct proportion to the demands of population. Brazil, having a territory of 3,230,000 square miles—nearly as large as the United States—has but a population of 11,780,000; its agricultural wealth is limited, and its commercial advantages are just beginning to be recognized. The British Provinces in America, with 3,636,375 square miles, has only a population of 4,835,500 most of whom are fed by the products of the forests; the United States, with 3,603,884 square miles, have a population of 38,925,598, and, out of a general wealth of \$30,068,000,000 receives as yet from agricultural products, but \$2,447,000,000. Russia in Europe, with a territory of 2,132,126 square miles, a large part of which is frozen up during much of the year, feeds a population of 73,142,155. The British Islands contain but 120,000 square miles and feed 31,817,108. France, with only 204,550 square miles, has a population of 36,102,821; Germany, with 210,776 square miles, 41,058,196 of population; Belgium, the little garden spot of Europe, with only 11,313 square miles, feeds 5,007,105; Japan, with only 149,399 square miles, feeds 33,000,000.

Necessity is thus as much, the mother of agriculture as of inventions, for these figures show that densely populated empires, are the most advanced in the necessities and requirements of agriculture. From these figures springs the hope that when necessity demands of us greater exertions, our barren fields will be called back to their native productions.

With the experience of nearly two thousand years, agriculture is but little ahead of its condition under the Roman Empire. During the 16th century, feudalism, which had somewhat elevated the condition of the peasant, gave way as printing began to drive out the mediæval darkness; the reformation came; the new world was discovered.

In 1534, a book upon farming appeared, it was written by Sir Anthony Fitz Werbeck, a farmer of 40 years standing. From it is quoted the following: "A housbande cannot thryve by his corne without cattell, or by his cattell without corne;" "Shape, in myne opinion, is the most profitabest cattell that a man can have."

There were several other collections of maxims and usages published subsequently, all of which were handed down from father to son. Finally, early in 1700 Jethro Tull made the first important experiments at real progress in the science. Without Chemistry or Geology to guide him, he made many errors, but he was, at least, a pioneer.

Tull introduced the horse-hoe, the drill and threshing machine. His name, though, is celebrated more for his theory that plants derive their nourishment from minute particles of soil, which led him to the belief that pulverization is the secret of successful manuring.

Though wrong in theory, he was right in practice, for pulverization is necessary to supply air to plants. He thought manures only valuable in disintegrating the soil. Authur Young, the next great leader, lived about 1741. He experimented to find the real cause of fertility. He first proved that common salt is a fertilizer. It was previously thought that ammonia was injurious; He says "the volatile alkali has never failed being of great service," he experimented on the sun's rays, and concluded, "that covering the soil in beneficial to it." He also found that nitrogenous manures increased the power of plants to avail themselves of mineral food. He also tried the effect of different gases on vegetation. In 1786, he says, "to imagine that we are ever to see agriculture rest upon a scientific basis, regulated by just and accurately drawn principles, without the chemical qualities of soils being well understood, is a childish and ignorant supposition."

The first practical work, however, was published by R. W. Dickson, in 1807. Its chief value is its collection of valuable experiments made by distinguished members of the board of agriculture. Several other authors succeed, Marshall, Johnstone, Davison, Donaldson, and Lord Kames produced improvements in agriculture reading, In 40 years, the general improvements among Scottish farmers were very marked.

The organization of a board of agriculture, suggested by Lord Kames and urged by Sir John Sinclair, in bringing the farmers of England together, greatly advanced the cause of agriculture. It was thus that Sir Humphrey Davy was brought to investigate the elements of the soil, and to apply the science of chemistry to the improvements of agriculture; and here, begins properly, the real progress of the art. His "Elements of Agriculture" explained the labors of Darwin, Knight and others upon physiology; taught that oxygen, hydrogen, nitrogen and carbon compose the greater part of vegetable tissues; that but small parts are materials of the soil itself. Davy showed how plants, soils and

manures could be analyzed and proper manures be selected to furnish the requisite ingredients. He found as Tull had previous asserted, that plants absorb nourishment only in the form of gas or solution in water, and hence, inferred that those manures which furnish the most soluble matter are the best. In 1807, he tried various salts upon barley, grass &c. in light, sandy soils, applying, twice a week, diluted solutions of sulphate, acetate, bicarbonate and muriate of potash, sulphate of soda, and nitrate. muriate, sulphate and carbonate of ammonia. He found, as Young had found, that plants fed with carbonate of ammonia, grew most luxuriantly, a result which had been anticipated. He experimented upon guano; recommended the use of bones, not so much because they contain phosphate of lime, as because they are filled with decomposable, animal matter, as jelatine, cartilage, fat &c, What Young marked out, Davy proved. On the continent, agricultural literature had even surpassed that of England. Kretschmar, Brichart, Stissen, and Sprenger, in Germany, were noted investigators. Still later, Baron Liebig explored Organic Chemistry; Hnmboldt developed natural history; Werner improved upon Geology and Mineralogy; Linneas the Swede, revolutionized the subject of botany.

In France, Duhamel, Buffon and Lavvisies made research in agricultural chemistry and vegetable physiology; the latter reformed the nomenclature of chemistry. As early as 1730, there were 13 agricultural Societies in France. The cotton spinning machine of Arkwright was invented in 1768; the steam engine of Watt in 1769; the cotton gin of Whitney in 1769.

I shall reserve a review of the agricultural progress in the United States for the July number of your Journal.

[TO BE CONTINUED.]

NOTE. For the readings in my last, "to the victor belongs the spoils; and "scarcely a glean of sunshine," please read, "to the victors belong the spoils," and "scarcely a gleam of sunshine."—J. D. W.

DUCKS AND GEESSE.—It is a little odd that in this country, where every facility exists, so few ducks and geese are raised. These are proverbially the most hardy and long lived of all our poultry. In places where cholera, etc., sweeps off the fowls and turkeys, geese and ducks, which are not subject to these diseases, should be tried. In densely populated Great Britain and even in Belgium, where one would suppose there was little room, more geese are raised to the square mile than in the United States. In the interior ducks and geese can be raised about as profitably as other kinds of poultry, and where diseases prevail, more profitably.—*Exchange*

THE APIARY.

(Bees and Honey in the South.

BY PAUL L. VIALLO.

CHAPTER XVII.

HOW TO INTRODUCE A QUEEN.

Before introducing a queen into a hive we must hunt up the one we wish to replace and take her out of it. To find the old queen, we must open the hive very quietly and try to prevent any jar or shake, and if possible use no smoke, especially if it is a black queen, as they are very easily frightened, and are apt to hide themselves, which increases our difficulties in finding them. A queen is more easily found in the middle of the day, while the majority of the old bees are in the field. We must take out a frame, with the least shaking possible, from the centre of the colony and look well on both sides of it, and if we do not see the queen on it, we must place it in an empty hive, that should be close at hand, and take another frame, and so on until we find the queen. If we should be unfortunate enough not to find her, we must look again as we return the frames to the hives, and if it happen then that we do not find her, we should close the hive and wait an hour or two, until the bees get quiet and try again. This is a trouble that I have never experienced with the Italians, but with the blacks I have often hunted a hive three times over before finding her majesty.

As soon as you have found the old queen and taken her out, put the cage containing the young Italian queen, to be introduced, between two combs of brood, right above the brood, where there is honey, and press the two combs against the cage so that the queen will be able to sip honey when she needs it. In about 48 hours we open the hive and release the queen on one of the combs, and we watch how the bees will act towards her. If they begin to attack her by pulling her legs or wings, we must secure her immediately and recage her for about 36 hours more after which they generally accept her. In the meantime I would destroy any queen cells the bees may have started.

The cage to introduce a queen can be made by winding a piece of wire cloth, three inches square, containing fifteen meshes to the inch, on a piece of round wood, about the size of the finger, and fastened where it laps over with a piece of wire from the cloth; the ends can be closed with corks. To prevent the queen from flying away when released from the cage, I would clip one of her wings before introducing, though she will generally return, if

the hive is left open for a few minutes. Whenever we have a queen of great value to introduce, such as an important queen, we shall run no risk at all if we make a new colony all of young bees, by taking frames of hatching brood and bees from two or three colonies, smoke them well, daub the queen with honey and drop her right into the hive. We must wait until the next day so as to give time to the old bees to return to their homes.

The above methods have always given me the greatest satisfaction. I have had queens accepted at once by dropping them right into the colony, immediately after removing the old queen; but at other times I have found some colonies which would not accept a queen, until she had been caged for eight days, but luckily this case is rare, and happens only when bees are not gathering honey, as it is seldom that they will fail to accept the queen after 48 hours caging.

There are several ways of introducing queens, but as the above are as good as any, I do not see the necessity of giving them. The fact is that whenever we receive a queen from a bee keeper, we shall also receive, if asked for, his method of introducing.

CHAPTER XVII.

THE HIVE.

We are indebted to the Rev. L. L. Langstroth for the introduction of the removable frame hive into the United States, and since then this branch of rural economy has progressed wonderfully and with such an impetus, that it is now a regular industry. The movable frame hive is generally believed to be patented, and many are under the impression that it cannot be used without paying a patent right; but I am glad to say that any of the movable hives which are worthy of our attention, can be freely used. Many so-called patent hives are sold, claiming that they are the best, that they have moth traps, and drawers and stops to keep the frames at equal distances, and such like nonsense; but I would here caution my readers against ever having anything to do with such hives, or patent right agents. The hive should be as simple as possible, such as four boards well nailed together, with a cover and a bottom, and the frames hanging in it, on tin rabbits.

In describing the hive I use, I will not pretend to propose its use in preference to others, nor do I claim to have invented it. Though this hive has given me perfect satisfaction in every respect, were I to start anew in Bee-keeping, I should give the preference to the Langstroth's frame—not that it is any better for the bees, after experimenting with many different frames I find no difference if

the bees are treated right, "unless it is in the convenience of manipulation, but because it is the one which is most generally used in the United States, and therefore more apt to be the one adopted as the standard. It is essential that all the frames used in an apiary should be of the same size, so as if one is taken from one hive it may fit in any other hive.

I would advise to have the lumber for hives and frames planed on both sides to a regular thickness of $\frac{7}{8}$ of an inch, as by having lumber of only one thickness for every thing in the apiary, we shall save trouble and measurements. By having a hand, or foot power circular saw, to saw the stuff for our frames and hives, and making our hives ourselves we shall find it a great economy and a pleasant pastime; it will be astonishing with what rapidity and accuracy, if we have the proper gauges adapted to the saw, we can turn out hives and frames.

It has been ascertained by careful experiments that the brood chamber of a hive should not be larger than 2,000 cubic inches; but as we want as much space again to allow the bees to deposit their surplus honey, we must make the hive double, either by having two 2,000 cubic inch hives one on top of the other, known as the double story hives, or by making it large enough to contain 4,000 inches in a single story. The Langstroth is of two stories each containing 10 frames. I make the hive as follows: I cut two boards 12 inches wide $16\frac{1}{2}$ inches long, and two 15 inches long, all $\frac{7}{8}$ of an inch thick; the two shorter pieces are rabbited out on the inside upper edge, $\frac{7}{8}$ of an inch deep by $\frac{3}{8}$ of an inch wide, and to prevent the bees from gluing the ends of the frames to the rabbits, I nail a piece of folded tin on each rabbit, in such a way as to have the frames to hang on the edge of the tin and so as to have the frames raised $\frac{1}{4}$ of an inch from the bottom of the rabbit. Nail the two longer pieces ($16\frac{1}{2}$ inches) to the short ones, making a box, without top or bottom, measuring inside $15 \times 14\frac{1}{2}$ inches and twelve inches deep. At the bottom of one of the ends cut an entrance for the bees about 8 inches long by $\frac{3}{8}$ of an inch deep.

The top and bottom of the hive are made alike by cutting boards as long and as wide as the hive and nailing pieces at the end to prevent warping.

To make the frames, get strips $\frac{7}{8}$ of an inch wide and 5×16 of an inch thick—cut one for the top bar scant $15\frac{1}{2}$ inches long, two for the sides 11 inches long and one for the bottom 13 inches long—now with $1\frac{1}{2}$ inch finishing nails, nail the top bar to the end pieces, so that it will project on each side 6-8 of an inch; this projection is to hang the frame on

the rabbits and to leave a space of $\frac{3}{8}$ of an inch between the side of the hive and the frame. Nail the pieces to the bottom bar, we shall have a frame measuring $13\frac{3}{4} \times 11\frac{1}{4}$ outside measure. The Langstroth's frame is $17\frac{3}{8} \times 19\frac{3}{8}$ outside measure. Now as we want our frames to hang true and to be square, it will be better to make a form to nail them in; a good form is made by cutting a board just the size of the inside of our frame, and nail this board on another about 2 inches larger all around. To nail the frame, put the strips against the smaller board and hold them steady with thumb screws. For a guide to the bees in the the frames; make a groove in the middle of the top bar about 3×16 of an inch deep and width of the saw, in which insert strips $\frac{3}{8}$ of an inch wide and just thick enough to fit tight in this groove. These grooves are easily made with a circular saw, by raising the table of the saw until just enough of the teeth of the saw project through, and by setting the guage so as to make the groove in the center of the top bar. By sliding these top bars over the saw, while it is turning, these grooves will be made very rapidly.

The advantages of a foot or hand power circular saw cannot be over-estimated in an apiary, especially for those who are not able to handle carpenter's tools. I have been using one for 5 years, and can make hives, frames, etc., without any square or hand saws, and the only tool used is a hammer to nail together.

Ten frames are put into the hive of 2,000 cubic inches, at about $1\frac{1}{2}$ inches apart from center to center; but it does not matter much in practice, whether they are at $1\frac{1}{8}$ or $1\frac{3}{4}$ inches apart. If we want to use a single story hive to contain 15 or 20 frames, we have only to make the hive $22\frac{1}{2}$ inches long by $14\frac{1}{2}$ inches wide inside measure for 15 frames, or 30 inches long and same width for 20 frames. I have been using the single story hive, because it saves the trouble of taking off the top story when I wish to examine the brood chamber below, and because I work nearly all my apiary for extracted honey, and even if I were to work my apiary for box honey, I should prefer to use the single story hive and place the sections or boxes on top right over the frames, after removing the cover and quilt. This quilt is a piece of thick cotton duck, which is placed right over the frames, so as to prevent the bees from sticking the frames to the cover. This has the name of quilt by the apiarists, as it is used in the North, not only for the purpose of preventing the bees from gluing the frames to the cover, but also for wintering bees and to keep them warm. This winter quite is a regular quilt with cotton butting, it is so convenient

in the manipulation of bees, that I would rather dispense with the top board than with it. With this quilt we never mash bees, we can open a hive without any jar and we do not require a chisel to pry the top board off, which the bees generally glue very fast with propolis.

Another very indispensable thing in a hive, is a division or partition board—especially when we use the long single story hive, so as to contract the hive according to its strength. This is only a board $\frac{1}{2}$ of the inside of the hive, so as not to fit too tightly, with projecting arms at the top to hang as a frame, so that when inserted into the hive it separates it into two chambers and fits just close enough to prevent the bees from passing through. It is very useful to contract the hive, when a swarm is hived, as the bees will labor better than if the whole room were given at once; it is better to move the division board back and add frames as the bees increase and necessity demands, until they require the whole of the hive. And also, there is, as I have stated before, in rearing queens, a necessity of an alighting board to each hive. This is a board with two cross pieces nailed to prevent warping, slanting from the entrance of the hive to the ground. I make it movable for convenience of passing the lawn mower and cutting grass—it should be as wide as the hive. I have stated above that the cover of the hive was only a board cut as long and as wide as the hive, supposing that the hives were shaded some way or another; but should the bees be kept in the full rays of the hot sun, and exposed to all kinds of weather, I would advise to make the cover something like the flat roof of a house, thus protecting them to a certain extent.

Whenever we wish to examine a colony or any internal operation of the hive before taking a frame out, we should push one or two of the adjoining frames a little forward or backward thus giving space to take out the first frame and prevent the squeezing of bees; also should the frame contain a great deal of honey and have been bulged at the corners by the bees to prevent the crushing of the comb, etc.

The advantages of the movable frame hive in apiculture above the old system of box hives are:

All the combs can be taken out and replaced at will, without injuring them or the bees.

All the combs containing honey can be taken out and emptied of their honey with the extractor without injuring them and they can be returned to the hive so that the bees may fill them again and thus not only give virgin honey, free from foreign admixture, but save a great deal of labor to the bees and honey to their keeper.

The queen can be examined at any time and be replaced by another when necessary.

The queen being the soul of the colony, it is evidently a great advantage to be able to ascertain if she is in a good condition, and also to see if the hive contains a laying queen or not.

The Drones consume a great deal of honey and therefore it is to our interest not to allow a great quantity in a hive, and this is easily done by taking the Drone combs out and replacing them by worker combs.

Artificial swarms are made at will and after swarms are prevented.

If a hive is weak, we can reinforce it by giving brood from a stronger one, etc. In a word we are master of our bees, and with the exception of the honey in the flowers, we direct and regulate all by means of the movable frame hive.—*Our Home Journal*.

HEREFORDS AS MILKERS.—This breed of cattle are becoming so popular in England and this country as a highly bred class of cattle suitable for all purposes, and best adapted for the improvement of the common stock in the hands of the largest class of farmers, that we embrace every opportunity to record facts in regard to their virtues. Hence we give the following statement of the Hon. J. Merryman, made in reply to some queries of ours as to the milking qualities of his herd. We think we can safely say, we are sure the Hereford cow exceeds in richness of milk the Short-Horn cow, as the Jersey exceeds, in our opinion, any other breed. Which of these several great breeds are best to cross upon others? is the great question. The Herefords unite many desirable qualities which popularize them with those farmers who breed for the purpose of getting a stock that will yield a fair supply of good milk, furnish fine large work oxen, and when wanted for the shambles will make the finest quality of beef.

Messrs. Editors:—Below find statement of yield of four Hereford cows, for the twenty four hours, ending at 6 A. M., on the 19th inst.

Princess Victoria, dropped calf, December 28, 1877,—3 gallons.

Fair Lady, dropped calf, February 18, 1878,—4 gallons, 3 quarts.

Bettie, (first calf,) dropped calf, March 19, 1878,—4 gallons, 1 pint.

Mary, dropped calf, March 25, 1878,—4 gallons.

JOHN MERRYMAN,

Hayfields, May 22, 1878.

The English feed for fattening sheep consists of cotton seed and turnips. They claim that it will put on the most fat, is the safest food, makes the best mutton at a less cost, and produces the best and strongest manure.

LADIES DEPARTMENT.

A Chat with the Ladies for June.

BY PATUXENT PLANTER.

May brought golden sunshine,
 May brought silver rains,
 Buttercups and daisies
 In the woods and lanes ;
 Lily bells and lilacs,
 Apple blooms like snows,
 Pinks, and purple pansies—
 But JUNE brought the Rose !
 Roses dyed in sunset,
 Full of amber light ;
 Roses dyed at dawning,
 As the dawning white ;
 Roses pink at sunrise,
 Bearing Love's device ;
 Red-lipped crimson roses,
 Full of hidden spice.

"The leafy month of the year"—JUNE—is once again with us. The foliage of bush and tree have attained their full luxuriance. The heat is considerable, but unlike the dry, scorching rays of a July or August Sun. The flowers are in gala dresses as attendants to their queen,—the Rose—whose royal progress is made this month. The grass is darkly green, and is a rich carpet for old age and infancy to toddle 'oer. We have brilliant Baltimore birds darting through the air—the red robing, black bird, and other birds chirping and singing merrily. The mock orange and the syringa of low stature, the majestic tulip trees, the yellow locust, and other American flowering trees are full of scented flowers, perfuming the air with odors, sweeter than the alembics of a Lubin or Farina ever distilled for the delight of royal beauties—may one and all enjoy to the full this bountiful month.

Talking of birds, reminds me of one, though small, attracts much attention just now.

The English Sparrow :—There seems to be a great contrariety of opinion, as to the value of these little strangers—many declare that they are of great value to the orchardist, tree culturist and florist, while others, and perhaps a majority, pronounce them an unmitigated nuisance. It is possible that they are of much value in cities, for the protection of shade trees, but they are not, and cannot be confined to the town limits. They spread aboard and become a pest to the farmer, while they deprive the rural cottager of one of the sweetest accompaniments of country life ; the twitter of the wren and the songs of many singing birds. They are so quarrelsome and in such pugnacious number, that the most innocent and charming songster are driven off, and our little friends, the wrens, native sparrows, orioles, robins, cat-birds

and mocking birds, &c. once the denizens of the house-porch-eaves—the trees and the lawn near dwellings, are no longer seen, and we are left without bird music ; so refreshing in early morn, and delightfully composing in the twi-light hours, when the day's toil has ended. I confess I am an enemy of this insolently arrogant Englishman, and go for his expulsion, unless he can be confined to the cities ; and if he visits the country at all, he learns to behave himself, and not fight our harmless singers ; eat the buds of our flowers ; destroy the blossoms of our fruits and grains ; suck off the first formations of small fruits, vegetables, &c. ; all of which, and more I charge him in my indictment before the grand inquest of farmers, and in the name of the harmless feathered tribe, and of the silent community of fruit bearing trees, vines and shrubs, and lovely, delicate members of the floral world. Ladies ! help me protect our old friends—the song-birds of our native land, so dear to our young hearts, against these foreign interlopers, whose only note is that of the discordant martial life.

What I said last month about ornamenting the grounds around your dwellings, however humble those abodes might be, I repeat this month with a word in addition, and a homely thought of my own. When speaking of the hop-vine as a good common plant to grow, I forgot to say, that it is both handsome and useful as a covering for rustic arbors, growing with the rapidity of Jacob's Bean Stalk. Its large dark leaves and hanging clusters of flowers, so valued for their virtues by the baker and the brewer, make it as pretty and effective a screen from the sun's rays as the grape-vine, which, however is slower in growth. The wild grape makes a more compact and neater cover for a bow than the cultivated grape.

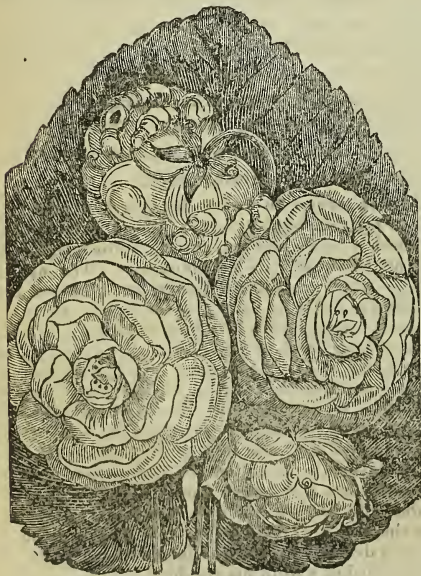
There seems to me to be a sort of affinity, a close relationship between a home and its inmates. I think a man's character can be known right well, by his home and its surroundings. The appearances of a home-stead generally indicates to a stranger, the sort of people that live there. It seems to fringe with brighter coloring the silent characteristics of its possessor. Pecuniary misfortunes, or other depressing circumstances may make an exception, here and there, only as exceptions to the general rule ; but lamentable indeed must be the condition of any one, who cannot plant a few trees and flowers to brighten the scene and cheer the heart of the sad, when so much cheerfulness and beauty can be had, with so little labor and without money. God has supplied them in the woods and swamps, and in the fields for man's delight and consolation, without price, and in profusion within his reach.

Among other new and beautiful flowers, I would call your attention to the following cuts, which Mr. Henderson has kindly furnished.



MONTHLY CARNATION—PETER HENDERSON.

Nantz & Neuner, of Louisville, Kentucky, introduced this new Carnation, and gave it the name of The New York Florist and Author. They describe it as a free winter bloomer, largest size, dwarf habit and pure white. The other is a rare, *New Double White Violet*.



BELLE DE CHANTENAY

Brought out by Mr. Henderson, for this year for the first time, we understand.

Flowers pure white, perfectly double, imbricated like a Camelia, as shown by cut; the flowers are immensely large, measuring $1\frac{1}{4}$ inches in diameter; it has the delicious fragrance of the Neapolitan Violet, and is equally hardy, requiring the same treatment in all respects as the other varieties of Violets.

I do hope each one of my fair readers can say with me, in the words of the Poet:

We have gorgeous tulips of golden and jet,
And gaudy scarlet, in borders,
We have gay carnations of brilliant hue,
And the beautiful moss rose gemmed with dew,
And we look on them with admiring pride—
But our love is for those on the other side.

There the delicate snow drop lifts its head,
And the violet peeps from its lowly bed:
And the breath of the lily, the pride of the vale,
Is floating sweet on the balmy gale;
While around our door the green ivy clings,
And the fragrant clematis its odor flings.

Dearly I love the sweet fragrant flowers,
They've cheered and gladdened my lonely hours,
And many a lesson they bear to me
Of holiness, meekness and purity,
Oh! dreary and sad were this world of ours
If God had withheld the bright, beautiful flowers!

MAKE YOUR HEAVEN HERE.—There is no royal road or short cut to Heaven. If you want a heaven for yourself in the one life that now is—You have no reason to think you will enter upon the next life any-wise changed in character from what you are when you leave this. "He that is unholy, let him be unholy still." And the character with which you leave this world will be the slow natural growth of the years of your whole earthly life, and can not be the result of anything else. The true conception of human existence doubtless is as one in this world and the next—this is the blade, that, the full corn in the ear.—Heaven is not something to be won or got or bought, either by ourselves or somebody else for us; but it is something to grow into. In the next world you are simply yourself, only moved on, and moved up.—*Exchange*.

In the Asparagus bed early radishes, can be grown, a frame can be placed over the plants to force them the Asparagus need not be interfered with. In the beet rows radishes can be grown and pulled before they interfere, between the cabbage plant lettuce and latter on horseradish, with the potatoes, in the garden sow peas, peas can be gathered and the vines left as a mulch for the potatoes.

GARDENER.

THE SOCIAL GLASS.

"'Tis but the social, friendly glass,
The cooling sangaree,
That makes the moments quickly pass
Away right cheerily.

'Tis only when the circle formed,
And friends have gladly met,
That I indulge; be not alarmed,
I'm not a drunkard yet.

'Tis but the social friendly glass,
This is the song of youth,
Who little dream that time, alas!
Reveals this solemn truth,

That he who even dares to look,
Upon the sparkling wine,
Will find—'tis true as God's own book,—
It stingeth, though it shine.

Touch not the social friendly glass,
Son, husband, father, friend,
For swiftly on the moments pass,
Soon time will have an end.

Then do not spend in sinful mirth
This life's bright golden hours:
Nor grovel in the dust of earth,
But rise to loftier powers."

DOMESTIC RECIPES.

RICE PUDDING.—To each quart of milk one tablespoonful of rice, sugar to taste; bake three hours. Frequent stirring makes the pudding creamy.

BOILED BATTER PUDDING.—One pint of milk, two eggs, one ounce of butter, one teaspoonful of salt, eight heaping tablespoonsful of flour; boil one and a quarter hours.

MACAROONS.—One and one-quarter pounds powdered sugar, one pound sweet almonds, bleached and pounded to a paste; whites of eggs, grated peel of two lemons.

IMPERIAL CAKE.—One pound of flour, one of sugar, one of butter, one of raising, blanched almonds, split, ten eggs, three-quarters of a pound of citron, one wine-glass of brandy, and one of rose-water.

SNOW SPONGE CAKE.—One cupful of flour, a little heated; one and one-half cupful sugar; two teaspoonful cream tartar, mixed with flour; (no soda) whites of ten eggs. This makes a very white, beautiful cake.

DRIED APPLE JELLY.—To one quart of apples put four quarts of water; let them stand all night; boil till the goodness is out of the apples; add a pint of sugar to every quart of juice, and boil till it comes to a jelly.

SPANISH CREAM.—One box of gelatine soaked in a large cup of milk or water; one quart of milk boiled and poured into it; then beat the yolks of eight eggs and add to the gelatine, with one and a half cups of sugar. Let it thicken as for custard. Beat the whites of the eggs in a dish, and pour in the custard; mix well; flavor with lemon or vanilla, and let cool in the mould.

SPINACH.—Wash spinach carefully in an abundance of water; pick off all decayed leaves, and rinse; put into a pot with no water except what clings to it in rinsing; cover close and cook gently till tender, which will require from twenty to thirty minutes, according to its succulence; then take up into a colander, place it over the pot to drain, covering it to keep it warm. If you have a perforated mould, it is very convenient to press it into that, and when drained turn out upon a platter to serve, being careful to keep it warm.

A SIMPLE REMEDY FOR CINDERS IN THE EYE.—Persons travelling much by railway are subject to continual annoyance from the flying cinders. A very effective cure is within the reach of every one, and is simply one or two grains of flax seed. They may be placed in the eye without injury or pain to that delicate organ, and shortly they begin to swell and form a glutinous substance that covers the ball of the eye, enveloping and foreign substance that may be in it. The irritation or cutting of the membrane is thus prevented, and the annoyance may soon be washed out. A dozen of these grains stowed away in the vest pocket may prove, in an emergency, worth their weight in gold.—*Journal of Chemistry.*

Journalistic.

Sunday Afternoon.—The June number of this interesting monthly, is out and sustains the fair promises of its pre-decessors. It is steadily growing in popular favor—Springfield, Mass., \$3.00.

Col. Thomas J. Wilson, late of the *Sun's* Editorial staff, has become the managing editor of the *Morning Herald*, Baltimore. The colonel's long experience as a journalist, and his acknowledged ability, will be a great acquisition to the *Herald*, which has already in its short career become a notable Journal in our Monumental City, and gives evidence of its budding honors soon ripening into the full blazonry of entire success.

The Rural New Yorker, comes to us in a much enlarged and improved form. It is a mammoth agricultural paper, filled with the best of solid matter, good stories, fine and varied illustrations, &c., so that it suits all classes of readers.

The Artificial Flower Guide, by J. Lowenstein, N. Y. Published semi-annually. We should think it a nice paper for ladies. Price only 25 cts.

Vick's Illustrated Monthly Magazine.—Still keeps ahead of all competitors in its line. We copy from it until we are almost ashamed. It is so good, is our only excuse.

Publications Received.

The Native Flowers and Ferns of the United States; by Prof. Thos. Meehan, Editor of the *Gardener's Monthly*, &c.

We have received the first two numbers of this National Work from the publishers, Messrs. L. Prang & Co., Boston, who publish it in parts, each containing 4 colored plates, in the best style of chromolithography, and 16 pages of letter press, sold only by subscription, at the low price of 50c.

cts. per number. Either one chromolithograph is worth the money. It is large octavo size. A gem for the drawing-room and a valuable acquisition to the library. We are delighted that such a work (long needed) has fallen in such competent hands as those of the practical and learned Prof. Meehan, and its publication committed to the competent and justly celebrated firm of L. Prang & Co., Boston, Mass. The typography is in full keeping with the beautiful chromo-lithography that distinguishes the works of this pioneer house in the great chromo art in this country. There is an immensely rapid growing appreciation of flowers, and especially of our native flowers, in all classes of the people, and there has always been a void in the floral literature of this country which is about to be filled by the publication of this national work, that will be useful to the botanist, interesting and instructive to every lover of American flowers and ferns, and an honor to the enterprise, the talent and skill of our great country. We shall notice with pleasure and pride the issue of the continuing numbers, and trust that we shall be able to record that great success with which it no doubt will meet, and which it so richly merits.

Maryland Prisoners' Aid Association.

The 9th annual report of this commendable society has been just received, and is of great interest to the reader, while it reflects great credit upon the philanthropic ladies and gentlemen who are engaged in this laudable occupation.

How to Raise Fruits.

This is the title of a neatly gotten-up little book by Thomas Gregg, and published by S. R. Wells & Co. (New York) at \$1 per copy. It is the latest and perhaps the best book now out, treating upon the culture of fruits. It is as full of instruction as an egg is full of meat. To be had at the office of THE MARYLAND FARMER, at cost. We can fully recommend it, and conscientiously say every beginner—and even the experienced—in fruit-growing ought to have a copy.

Dr. W. C. Van Bibber has kindly sent us a copy of his essay on *Ventilation*, written for the Maryland State Board of Health.

L. L. Polk, Commissioner of Agriculture, has forwarded to us his Report on the general condition of the Agricultural Interests of North Carolina, which is replete with facts, and other matters of great interest to immigrants to that Old North State, whose condition is at present rapidly improving.

Pettengill's Newspaper Directory, for 1878.

The number of newspapers and other periodicals in the United States, recorded in *Pettengill's Newspaper Directory and Advertisers' Hand-Book* for 1878, is 8,133, of which there are 752 daily, 61 tri-weekly, 114 semi-weekly, 6,185 weekly, 111 semi-monthly, 831 monthly, 18 bimonthly, 61 quarterly. The arrangements of the Directory for ready reference, and for the special and general business purposes of advertisers, is excellent. It should be in the hands of every man who wishes

to advertise extensively, and who wants to know just when, where, and in what papers to do so, for the greatest advantage to his interest. It is very reliable.

Second Biennial Report of the State Board of Health of Maryland. January, 1878.

This is not only an able, but very interesting report, and is also important to every citizen, and therefore it would be well to be read and carefully considered by every one who values the scientific laws of health,—which show how easy it is to avoid many of the diseases to which our people are exposed by causes that can ordinarily be removed or prevented, with the slightest trouble and a little carefulness. Our thanks are due to Dr. Chancellor, the worthy and energetic Secretary of the Board of Health, for a copy of this admirable report.

OUR NEW ADVERTISERS.

We refer our readers to the large number of advertisements in our Journal, and especially to some who are newly added, as also to those requiring at our hands some apology, as for instance our long continued advertisers, MESSRS. TURNER, 42 West Pratt Street. Our types unaccountably did them injustice, in saying in our May number that they offered their Ammoniated Bone Super-Phosphate at \$45 per ton, when they offer it at the *very low price of \$40 per ton*. We suppose the compositor thought \$45 low enough, forgetting that *hard times* were met by Messrs. Turner with *low prices*.

Those in search of building materials had better call on THOMAS MATTHEWS & SON; see their advertisement in this number.

WM. B. PRICE & Co., Manufacturer's Agents for sale of Harrison, Bros. & Co., white lead, colors, chemicals, &c., No. 6 S. Charles St., as seen by their advertisement, are ready to serve the public in their line at lowest prices for prime articles.

T. C. EICHMAN, Merchant Tailor, 12 St. Paul Street, has an establishment, where those who may want a suit of clothes with certainty of a good fit, will not be disappointed by calling on EICHMAN.

Those in want of that necessary article, can be well satisfied as to fit and price, by calling at T. J. Irving & Co's Shist House, as designated in our advertising columns.

\$! will go as far at Jones' Crescent Dollar Store, as anywhere. Look in at No. 220 W. Baltimore Street, when you visit the city, and you will be enticed to spend *one* or more dollars.

Our advertisers—T. G. VALIANT & Co.—offer at low prices, superior Window Shades, Lambrequins Cornices, &c.

H. S. BELL, 138 W. Fayette Street, has on hand an extensive lot of beautiful Hobby Horses, Children's Carriages, Sleighs, Sleds, Wagons, &c., at low figures, and of first quality and finish.

HON. JOHN MERRYMAN advertises some superior South-Down rams for sale.

The MESSRS. WHITMAN, SONS & Co., are doing a large business in their specialties—Grant's Cradles and Corn and Cob Mills, Reapers and Thrashers, Montgomery's Improved Rockaway Wheat Fans, &c. See their advertisements.